

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. 2.

MANHATTAN, KANSAS, SATURDAY, APRIL 22, 1876.

No. 1.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

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Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

The Complete Arborist.

People living in the cities have sorrows of their own. It is bad enough to see one's trees die with absolute regularity and dispatch, without the aggravation of Prentis, of the Commonwealth, sprawling on the top board of the fence, picking his teeth with a straw, and poking such things as the following at you, while you wrestle with sweat and perplexity in planting new trees:

Yesterday was a "real Kansas day." That is the regulation thing to say about fair days; when it is stormy we remark that the weather reminds one of New Hampshire, or Illinois, or Indiana.

The weather being favorable, the Topeka householder set about the annual ceremony of setting out trees in front of his domicile, and a Commonwealth emissary leaned against the fence and watched the operation with a heart full of sympathy. The simple faith of the Topeka tree-planter is very touching. It is more affecting than the poetic picture of "Hannah at the window binding shoes." Year after year, as soon as the sun is hot enough to burn the skin off the back of his neck, the property-owner jerks his coat, seizes his spade and goes to setting out trees. It is nothing to him that, year after year, he sees his fondest cottonwoods decay; that rapacious cows eat the trees up, root and branch; that mules and horses trample them under foot, and predatory pigs alternately rub and root them off the face of the earth; that new and strange bugs (invented for the purpose) bore into their vital parts—and grasshoppers descend from on high to reduce them to nakedness; the indefatigable Topeka tree-planter comes out every spring with the regularity of the famous ground-hog.

There are various ways to plant trees, and all the systems were in process of illustration yesterday. Information in large masses can always be gained by standing around and conversing with the parties who are engaged in the act of beautifying our noble avenues with magnificent trees designed to convert the town in a few years into a perfect bower. For instance there is Mr. F. W. Giles. He was, yesterday afternoon, supervising the labors of a stout man who was removing the corpses of last year's cottonwoods and replacing them with candidates for next spring's wood pile. Mr. Giles, with forced calmness, remarked that this was his third planting on that line, but owing to the shrinkage of values which has set in all over the country, and in all departments of business, trees were much cheaper than formerly. The first trees that

he had die on his hands, cost him \$2.00 each, while he was now laying in prospective kindling wood at twenty-five cents a tree. He had, however, discovered the real secret of tree-planting. He called attention to the fact that all trees planted close to the Osage flagging sidewalk were alive, while the row next the street were dead. The deduction was plain. Trees should be surrounded by big, flat rocks, then they would live to a dead moral certainty. Any person possessed of ordinary reasoning powers can see from this how the Capitol square can be beautifully and permanently improved. Set out the requisite number of trees, and cover the entire surface of the ground with Osage flagging; this, when painted green in imitation of blue grass, would be neat but not gaudy, and durable beyond calculation.

Mr. T. L. King has gone into the tree-planting business on the principles on which the Indian's gun was loaded, "plenty powder, plenty kill." All along the front of the King block were arranged clumps of trees, reminding one of the masked batteries we heard so much about at the beginning of the late war. Mr. King explained that the dead trees saved over from last year had been left in position as an encouragement to two or three live ones set out together, in the hope of the "survival of the fittest." Mr. King disregarded Mr. Giles' "testimony of the rocks," and believed in the saving and healing virtues of mulching.

Mr. John R. Mulvane's trees had survived the ravages of live stock, of various kinds, grasshoppers included, but had finally yielded to the destructiveness of a city engineer. The public service imperatively demanded that a street no team ever traverses should be cut down just enough to extirpate two rows of maples. These rows Mr. Mulvane was restoring. For each tree what looked like a young cistern had been excavated, and before any tree had been put in place the roots were dipped in water then sprinkled with pure Kaw river sand; this done, the tree was set up and the roots covered with four kinds of dirt. The operation, we were informed, was strictly scientific, and recommended by the most eminent authorities, and yet it was impossible to shake off the conviction that a wandering cow had as soon eat up a tree set out that way as any other.

People who jump at conclusions will think we are opposed to tree planting, but this would be unjust. We know of nothing that calls into exercise more fully all the highest qualities of human nature, fortitude, perseverance, meekness, forgiveness, patience and "sich." Tree planting brings into play both muscle and mind; the first in actually setting out the trees, and the second in inventing means to protect them from cows, horses, mules, sheep, hogs, grasshoppers, borers, drouth, hurricanes and Street Commissioners. The man who can make trees grow is as great in our estimation as he who can keep hotel.

THE immigration to Kansas, at the present time, is very large.

Cultivation of Asparagus.

Just at this season of the year I am reminded of a method of asparagus culture which I have taken in practice, but which I have never seen recommended. The old method of planting asparagus roots deep in the ground results in a crop of tough white stalks, and a much later coming in use than if the roots were near the surface when the first rays of a spring sun would bring them into activity. The plan I recommend is as follows: Early in April or the last of March make a moderate hot-bed in the usual way. Cover with glass sashes heavily whitewashed for shade from the direct rays of the sun. On this bed sow the seed thickly. In May, when the young plants are about three inches high, choose a damp day and draw them carefully. If for garden culture, lay off your ground in rows two feet apart, and set the plants nine inches in the row, with an ordinary dibble, pressing the soil tightly about the roots. The soil should have been previously prepared by deep digging and very heavy manuring, and if of a light nature all the better. The plants will grow right along, and cutting can commence a year earlier than if grown in the usual way. I can show a bed here grown in this way from which shoots, stout as one's finger, were cut for the table the spring following the sowing of the seeds. It is well known that asparagus roots, though hard to kill after once established, are difficult to transplant successfully if packed and transported a distance. Frost and drought do not hurt the roots, but it is extremely difficult to pack for shipment so they will not get slightly heated, and once heated they are done. Some years ago when the Conover was a new sort, the writer paid \$300 for 30,000 roots of this variety. They were shipped about fifty miles, packed very tightly in hogsheads, and when opened were warm, but looked all right, and were carefully planted. Out of the whole 30,000 I do not think a hundred ever sprouted. In buying asparagus roots from a distance always instruct the shipper to pack in dry moss or hay. By the method detailed above, however, any one can get an asparagus bed from the seed as soon as though they bought the roots and were successful with them.—[Correspondence in American Farmer.]

The Concordia Empire understands that from the sheep flock of Mr. Joseph Hostetter, whose farm is two and a half miles northwest of Glasco, the winter's product (from January 1, to about March 20,) of lambs was 127. Of this number but three have died.

The Marshall County News says: In the herd-law counties there are few stray stock. We have for several months compared the list in the Kansas Farmer, and in counties where the herd law does not exist there are generally long lists of stray cattle and other stock, while in the herd-law counties there is only now and then a stray animal.

THE State Library is worth \$25,000.

THE INDUSTRIALIST.

SATURDAY, APRIL 22, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.
ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

WE repeat the statement of last week that, as an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

IF there is anything of which the INDUSTRIALIST has a greater quantity than any other thing, it is a genuine sympathy for distressed humanity. Among the many virtues which contribute to its glory none is more luminous than this, except its modesty. In beginning the second year, it looks with sadness at the large number of people in the United States, and even in Kansas, who through ignorance, inattention or inability have not yet secured the knowledge and pleasure which may be obtained by paying the paltry sum of seventy-five cents for its "Vol. II." The "cheek" in this article alone is worth twice that amount; and, owing to the approaching political campaign, the general stock of impudence is getting short. Send in your name for the INDUSTRIALIST and make a thousand per cent on your investment.

Labor Saving Climber.

In the nearest woods you will find a climber which in habit is so like the poison vine as to be often mistaken for it, called the ampelopsis. The difference between the two is shown by the leaf, that of the latter having five lobes, while the poison vine has three leaves growing close together. The ampelopsis is as harmless as a honeysuckle, and in addition to growing rapidly, after the first year, will absolutely take care of itself, needing no support or training except that furnished by a wall, tree, or the side of a house. We have tried it for five years and have found it gloriously indifferent to winds, heat, cold, drouth, grasshoppers and every other pest. With us it has done better in a northern exposure, though we can show the south side of a frame kitchen completely covered by it. An hour's work now will, three years hence, give you shade and beauty for which you will then take no price. Try it.

The type-setting on the INDUSTRIALIST during the first year of its publication, was done by the following members of the printing classes as a part of regular class practice:

D. A. Beamer, W. P. Burnham, C. C. Crouse, W. S. Fraunberg, J. S. Griffing, J. M. Howard, F. B. Landon, Thomas Midgley, Arthur Merritt, B. H. Pound, W. H. Jenkins, G. A. Richmond, Irving Todd,

E. H. Ulrich, J. E. Williamson, J. B. Flack, Charles S. McConnell, A. H. Wisner, L. N. Houston, U. G. Houston, C. P. McCallum, S. H. Stockwell, C. H. Thompson, Mark Brown, W. W. McKanless, G. A. Wake, J. W. Rambo, Miles Ellsworth, Jay Dutcher, S. F. Branson, Wm. Maltby, Bernhard Anderson, C. A. Dow, and G. A. Gale. Misses Ella Winne, Anna Rhoades, Rowanna Harding, Kate Hoyt, Fannie Parkerson.

In addition to the work performed during recitation hours, the following students have kindly helped us out on many occasions, for which we return especial thanks: Irving Todd, W. S. Fraunberg, F. B. Landon, W. P. Burnham, C. S. McConnell, Miles Ellsworth.

Sheep Husbandry in Kansas. No. 4.

In previous articles under the above heading, we have discussed more or less fully the general bearings of this subject. It is now in order to inquire into the profits of the business. During the fall of 1875 we addressed letters to prominent wool-growers living in different parts of the State, asking such questions as would bring out the experience of these gentlemen and facts most interesting to men who have had no experience in wool-growing in Kansas. For the very full replies that have been received we feel greatly indebted to the courtesy of these correspondents. As the facts thus brought out will answer more completely than any individual experience can, we offer a few extracts from these communications in answer to the question

WHAT ARE THE PROFITS OF WOOL-GROWING?

Mr. John Richey, of McPherson county, writing January 8th, 1876, says:

"A little over one year ago I bought one hundred Merino ewes in Pottawatomie county, paying for them \$300.00, and a Cotswold ram for which I paid \$30.00. They had access to good range during the winter; part of the time they were herded with my cattle. I think they were fed less than five tons of hay, but no grain. I lost but one sheep and that was injured by a dog. I sheared, the last week in May, 785 pounds of wool which sold at twenty-six cents per pound in the dirt. In addition to \$204 received for wool, I raised eighty-one lambs worth this fall \$3.00 per head; by a little closer attention during lambing-time I might have done better than this. You can judge whether or not the investment paid.

For my purpose I think the long-wool grades will suit me best, as I propose to practice mixed husbandry. I live on a smooth prairie surrounded by fine farming land, and shall have to keep my sheep on my own land and do not expect to keep over five hundred head. If I lived near a large range and raised but little grain, I should keep full-blooded Merinos. My sheep have not been troubled with any disease."

This letter of Mr. Richey's is very suggestive, and we wish that every farmer who has been accustomed to rely upon crops of wheat and corn would consider whether, after all his plowing and sowing and risk from grasshoppers and drouth, his favorite crops will

give him a return of \$447 for the same amount of labor and cash invested in these one hundred sheep.

Mr. Geo. T. Polson, Fancy Creek, Riley county, gives us a very interesting account of the operations in sheep-raising of the Winkler Bros., German neighbors of his. He says:

"In the fall of 1869 they purchased in Illinois six hundred Merino sheep; since this they have sold at least six hundred head, and now own not far from eight hundred sheep. They think the Merino grade best for wool and hardiest when kept in large flocks; have tried Cotswolds and say they are a failure for this country. Their sheep last season sheared seven pounds per head, and for the wool they received twenty-eight cents per pound.

They have always lost a good many lambs from not having shelter in the spring; are now provided with comfortable buildings, and although they have a good many young lambs already have not thus far lost any, and expect this year to save all. Sheep always healthy; have had no disease of any kind in their flock."

Mr. Polson concludes thus: "The Winkler Brothers are perfectly satisfied with the business, and they think sheep are more profitable than any other kinds of stock, and that after having given horses and cattle a thorough trial. Mr. Weisendanger, living near by, has some three hundred head; has been in the business two years; is perfectly satisfied with it; has had better success in saving his increase, having better shelter than the Winklers till this winter. His sheep are grade Merinos and have always been very hardy. No disease. He is an old cattle-raiser, and now raises a good many horses, but thinks the sheep pay the best."—[Prof. E. M. Shelton.]

The INDUSTRIALIST, the little paper published by the Agricultural College, has just completed its first year. It says:

"The great bulk of the type-setting has been done by the members of the printing classes, and not a line has been set nor an impression made by any one not connected with the Department."

The typographical appearance of the paper is excellent and reflects great credit upon the printing class.

The contents of the paper are interesting and valuable. We have found occasion to use many of its articles in the agricultural department of the Journal. We congratulate the INDUSTRIALIST and all concerned in getting it up.—[Lawrence Journal.]

A Fair Peach Crop.

We are much pleased to know that our predictions in reference to the total ruin of the peach crop were unfounded. We are informed that many of the buds are uninjured as yet, and that a fair crop will be gathered if no further drawbacks are encountered.—Garnett Plaindealer.

As near as we can ascertain, the prospect is good for a first-rate crop of peaches. Fruit-growers are more or less scared every season, and every spring we hear the same old story about the "peaches all killed," but as the season advances, we find, nearly always, that the frost has spared enough of the buds to make as many peaches as the trees can bear.—[Leavenworth Times.]

THE INDUSTRIALIST.

SATURDAY, APRIL 22, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:40 A. M., and 3:37 P. M.
Going West.....	8:05 P. M. and 7:30 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, April 19th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean		Mean Daily	
Thursday....	43°	32°	35.0	29.782	N-W	40
Friday.....	59	10	47.7	29.842	S-W	22
Saturday....	71	38	58.2	29.749	S-W	28
Sunday.....	58	48	51.5	30.163	N-W	28
Monday.....	56	38	46.0	30.288	N	15
Tuesday....	73	39	61.7	29.812	S-W	36
Wednesday	80	50	65.5	29.616	S	50

Rain-fall in inches .22.

HARRY F. MCFARLAND,
Serg't Signal Service.

Number of students enrolled this term 193.

Old newspapers, at fifty cents per hundred, for sale at this office.

The attention of builders is called to the advertisement for bids.

This is the time of the year when the smartest and handsomest people in the world subscribe for the INDUSTRIALIST.

The annual oration before the Kansas State Agricultural College, will be delivered by Major J. K. Hudson, editor of the Kansas Farmer, Wednesday, May 17th, 1876.

Though so near the end of the term students are still coming in. Those received this week are Phebe Rathbun, of Manhattan, and Lucy A. Knipe, of Riley county, both entering for the purpose of reviewing studies and preparing for next term.

The College societies have chosen the following members to represent them in the Under-graduates' Exhibition at the next Commencement:

WEBSTER: Louis B. Rogers, of Dickinson county; and Marion F. Leisure, of Linn county.

ALPHA BETA: Esther E. Evans, of Plainfield, Illinois; and John S. Griffing, of Riley county.

DIAGNOTHEAN: Ella M. Winne, of Riley county; and Alphonso R. Oursler, of Jackson county.

"It never rains but it pours." Prof. Kedzie, who is already at work upon an analysis with reference to a supposed case of poisoning from Neosho county, was on Tuesday visited by Sheriff L. D. House, of Osborne county, with reference to securing an analysis upon another case from Osborne City. As the sheriff's instructions were if possible to secure an analysis here at any price, the work has been accepted.

Too great care can not be exercised by the ladies in the use of these bright green gauzy fabrics so fashionable for summer wear. A specimen was brought into our chemical laboratory a few days ago which had occasioned severe and alarming symptoms of poisoning, bleeding at the nose, painful inflammation in the throat, etc., in the lady who was engaged in constructing a dress therefrom. The fabric when shaken emitted a cloud of green dust which upon examination was found to be nearly pure arsenite of copper of which the main bulk of the coloring matter consisted. What wonder at the result. Bright green in cheap fabrics is at best a suspicious color and had best be given a wide berth.

We copy the following items from this week's Nationalist:

The crops on the College farm are in excellent condition, and give fair prospect of a large yield.

The Websters received a pleasant call from some ladies last Saturday evening. While the ladies are not taken as members they are always heartily welcomed by the society.

The Diagnotheans have recently had their constitution printed and distributed among the members. The book was neatly gotten up by Messrs. Todd & Merritt, of College Hill.

The annual address delivered by N. L. Prentis, at the commencement in 1875, besides having enjoyed a wide-spread circulation in this country was extensively read by Americans in Japan.

Messrs. Ulrich and Lynch, students of the College, are each making a turning lathe this term for his own use. The castings were made at Leavenworth, after patterns which they had fashioned here at the carpenter shop. The remaining parts of the machines are to be made wholly by themselves.

Students' Column.

At the last meeting of the Webster Society there was a good attendance, nearly all the members who are now attending College being present. Of course the Webster Society must bear its share of loss resulting from the departure of students for home and spring work. The exercises were as interesting as usual, the debate especially, on the question of a State herd law, being quite spirited, the judges rendering a decision unanimously in favor of the affirmative. Mr. Hodges having been elected critic and Mr. Bletcher marshal, to fill vacancies, were installed. The society was favored by a visit from some of the lady students, who were welcome as young ladies always are.

REPORTER.

Special Notices.

Job Printing of all kinds done with neatness and dispatch, and at very low rates, at the Nationalist office, Manhattan, Kansas.

49-tf

To RENT.—Convenient house for rent near the State Agricultural College. Board taken for the rent. (52-tf) WM. E. GOODNOW.

Mrs. Cripps, Supt' of the Sewing Dep't, desires us to announce that the department is prepared to attend to dress-making, cutting and fitting. Work executed with neatness and dispatch.

The Mechanical Department is manufacturing tables, stands, wheel-barrows, harrows, cultivators, scroll-saws, wall brackets, letter and paper holders, and fancy articles of various kinds, all of which are offered for sale on low terms.

Job work, in shape of metal and wood turning, drilling, light and heavy bracket and scroll-sawing, carving, moulding and pattern making for castings, will be done with neatness and dispatch on reasonable terms. Apply to A. Todd, Supt'.

BONDS.—School District Boards about to issue bonds will remember that we have a new blank made PAYABLE TO ORDER, so that there can be no risk in sending by mail; and that our blanks will always have the preference. See advertisement.

BERKSHIRE PIGS FOR SALE.—We have two litters of very handsome Berkshire pigs which will be ready for shipment within the next two months. Orders will be filled in the order in which they arrive. Price, \$10.00 each. Address, E. M. Shelton, Sup't Farm.

Two Devon cows, five years old, imported from Canada and very fine, are offered for sale by the College Farm at very low prices, namely \$75.00 each. These cows are regular breeders, and of great individual merit. With these we can sell a three-year-old Devon bull if desired. The three animals can be had for \$200 cash. Address, E. M. Shelton, Sup't Farm.

The College Farm offers for sale the nicely-bred Shorthorn bull whose pedigree follows:

COLLEGIAN.—Recorded in Vol. 15th, A. H. B.; calved, Oct. 23d, 1875; mostly red; sire, 3d Prince of Oxford, 12676.

1 dam, Grace Young 5th.....by Tycoon, 7339.
2 dam, Grace Young 2d.....by Gallant Duke, 6749.
3 dam, Grace Young.....by Imp. Fortunatus, 1564.
4 dam, Cassy Young.....by Wellington, 2366.
5 dam, Poppy.....by Tom Marshall, 1039.
6 dam, Light Mary.....by Cassock, 3503.
7 dam, Judith Clark.....by Imp. Goldfinder, (2066).
8 dam, Young Mary.....by Jupiter, (2170).
9 dam, Mary.....by Saladin, (1417).
10 dam, Lucy.....by Meek Bull, (2288), &c.

It will be seen that this young bull belongs to the popular Young Mary sort. His dam, Grace

Young 5th, sold at public auction in 1873 for \$1,080. Of his sire it will be sufficient to say that he belongs to the Bates family of Fidgets, he being by 1st Grand Duke of Kansas 5731, out of the imported cow, Fidget 6th. Price \$225. Address, E. M. Shelton, Sup't Farm.

Courant, COTTONWOOD FALLS. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 1-1m

To Builders.—Sealed proposals will be received by the undersigned at Manhattan, Kansas, until 5 o'clock P. M., Wednesday, May 10th, 1876, for the erection of one Laboratory and one Horticultural Building. Plans and specifications may be seen, after April 24th, at the office of N. A. Adams, in Manhattan, and also at the office of E. T. Carr, Architect, Leavenworth, Kas.

Bids will be received for the whole work complete, or for stone masonry and excavation in one bid and the balance of the work in one consolidated bid. The right is reserved to reject any or all bids offered.

N. A. ADAMS, Sec'y.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

Township Books, Poor Records, Estray Records, Poll Books, Official Records, furnished by the Kansas Publishing House, Topeka.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Physician and Surgeon.—L. J. Lyman, M. D. Prompt attention given to calls, day or night. Office and residence No. 27, Poyntz Avenue, Manhattan. 37-3m

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The winter term began Wednesday, Jan. 5, and closes Wednesday, May 17, 1876.

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

Webster Society of the Kansas State Agricultural College. Organized, October 12th, 1868; chartered, January, 1871. Motto: "Labor Omnia Vincit." Meets Saturday evening each week. M. F. LEASURE, President. C. F. TRAVELUTE, Secretary.

Alpha Beta Literary Society.—Organized, October 17, 1868; chartered, December 26, 1870. The Society holds its sessions in the College building, every Friday afternoon at two o'clock. Both ladies and gentlemen admitted. Visitors always welcome. GEO. A. GALE, President. C. M. GROVER, Secretary.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects inimical to the Kansas Farmer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

School District Bonds.—Several thousand dollars in School District Bonds wanted March 1st, for which the highest prices will be paid. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. For prices and blanks, address E. GALE, Loan Commissioner, Manhattan, Kan.

THE INDUSTRIALIST.

SATURDAY, APRIL 22, 1876.

Mr. A. D. Swan, in a late number of the Independence Tribune gave the actual cost per acre for raising corn and cribbing it, (except interest on investment) in this county at \$5.20 per acre. Mr. G. W. Burchard, a granger, who has run a farm and hired every part of the work done by contract, publishes in the Kansan his figures. He had the crop put in well and cultivated three times, and the corn cribbed, and the entire cost was but \$3.66 per acre. The average yield in Montgomery county is 42 bushels per acre, or from 8½ to 12 2-5 cents per bushel.

The Eureka Herald says that J. P. Hillyard and W. E. Hohimer of that place have invented an improved wheat-planter. It differs somewhat from the drill in its action, as it deposits the grains in hills instead of a continuous row. The construction of the machine is simple and ingenious, and it will work easily and will not fail to deposit the seed. There is a vibrating cut-off which is arranged to convey the proper quantity of seed which falls through the tubes into a small furrow made by the knife which runs in front. The seed is covered by a narrow wheel which follows, acting as a roller on the furrow, rolling a narrow strip of ground where the seed is planted, but leaving it rough elsewhere. It works well and does not miss. People say wheat so planted does much better than that put in the ordinary way.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

The Nationalist.—A Republican Reform weekly, published at Manhattan, Kansas. Contains reports of Bluemont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year, strictly in advance to all except those living in the vicinity of Manhattan.

49-tf

Gardening for Profit!—Instruction and Drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening. Kansas Forest Culture a specialty. Seventy acres devoted to experimental apple, pear and peach Orchards, Vineyards, Nursery, and Gardens.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

GEO. W. MARTIN, Publisher.

The College Farm keeps on hand and usually for sale specimens of Shorthorn, Galloway, Jersey and Devon Cattle, and Essex and Berkshire Swine. We offer for sale one yearling bull and one two-year-old Devon bull, and two Devon cows respectively three and four years old. All imported from Canada. Price, each, \$100. Address E. M. Shelton, Sup't Farm.

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KANSAS STATE AGRICULTURAL COLLEGE.

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Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

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To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

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The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

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CALENDAR:—Winter Term began Wednesday, January 5, and closes Wednesday, May 17, 1876. For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, APRIL 29, 1876.

No. 2.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Kansas—The Era of Prosperity.

The Lawrence Journal recently said that the present was the first year of real, solid, substantial prosperity Kansas had ever known, since it was the first time in the history of the State that its prosperity was based on something else than ephemeral or accidental causes.

There is a great deal of truth in this statement. We went down to hard-pan during the disastrous years of 1873-74. Previous to that time the life of the State had been a succession of excitements. Kansas was the John-the-Baptist of the great civil war. During her territorial pupillage there was neither enduring or solid prosperity in her growth. Excitement, a sentiment, love of adventure—these and other kindred motives attracted people hither from all points of the country. During the civil war Kansas progressed as a crab is popularly supposed to move, backwards. She had not as many inhabitants when the great struggle closed as when it commenced. Following the war, Kansas grew with wonderful rapidity. The unsettled condition of the Southern States; the thousands of Northern soldiers returning to their homes and finding their old places filled, and all the conditions of the old home-life so changed that it was not only new and strange, but unsatisfactory to them; the great wars in Europe which speedily followed; the unstable and speculative tendency of the inflation period; the restlessness and love of excitement and change born of the war, and so strongly tinturing our body politic as to be a National characteristic for the time—all these conspired to populate Kansas with a hardy, brave, energetic, enterprising people, and keep her, to use a western phrase that is expressive, if not elegant, "booming right along."

But the time came when the speculative era collapsed like a punctured soap bubble, when the war fever and its excitement had worked out of the blood, and when men began to see that we must go back to the old ways and the old life, and that in these, anyhow, were to be found the greatest happiness and the most enduring prosperity. With the dawn of this era, most unfortunately for Kansas, came first the drouth of 1873 and then the locust and drouth of 1874. Either of these, without the other, would hardly have been felt as a serious calamity—succeeding each other, and blotting out the labor and the crops of two years, they were well nigh fatal to Kansas. No other State in the Union could have recovered from such a calamity in less than half a dozen years. Kansas was restored in one, and here, on the dawn of the second year following this terrible calamity, drouth and

locusts are only a memory. Old soldiers joke about the hardships and privations of their campaigns, if indeed they remember the sombre and trying ordeals of their experience in camp and field. They vividly recall the pleasant episodes of their soldier-life, and remember with pardonable pride the glories of the great scene, now passed into history, with which they were personally identified. Just so Kansans look back upon the past, forgetting all that is dark and discouraging during the recent years of disaster, remembering with lively satisfaction the years of fruitfulness and plenty, and glorying in the wonderful beauty, fertility and development of their State, in whose future greatness and prosperity they have the most implicit confidence.

And this confidence is fully justified. Kansas is a grand young State, and will have a grand future. Her growth has been phenomenal. Her history is the most exciting drama of modern times. Her soil needs only to be "tickled with a hoe and it laughs with a harvest." Her climate is healthful. Her resources and wealth have only begun to be developed. The countless millions of buffalo that once fed upon her beautiful prairies will soon be succeeded by countless millions of cattle and sheep. She has coal, and gypsum, and salt, and lead, and other minerals, and the deposits of some of these are great enough to supply the markets of half the continent. Her crops of last year would feed a population of five million people. Her railroad system is more complete and extended than that of four-fifths of the States of the Union. West of Kansas is the richest mineral region on the continent—Colorado, New Mexico and Arizona—which will contain, within five years, millions of people engaged in mining and manufacturing industries. This population will be supplied with breadstuffs and other agricultural products by Kansas, because Kansas is their nearest and most direct granary of supplies. In less than a dozen years nearly every bushel of wheat and corn we raise in Kansas will be shipped West, instead of East, because our nearest and best markets will be found in this rich mining region.

These facts are well understood and appreciated, and this is why every train arriving is loaded with immigrants for Kansas, and along every road leading hither are seen the white-topped wagons of movers to Kansas. Very few even of our own people know how great is the tide of immigration pouring over our prairies. It is almost unprecedented, this exodus to Kansas from all parts of the country; and it is growing larger every week. One of the most intelligent and observant men in Southwestern Kansas told us, a few days ago, that the county in which he lived had at least one thousand people added to its population within two weeks.

We feel confident, in view of all the circumstances surrounding our situation, that Kansas is about entering upon such an era of real and abundant prosperity as she has never before known. Every indication promises, this year, the largest and finest

harvest the State has ever reaped. There is hardly a doubt that we shall have the heaviest immigration, during the Centennial year, that ever poured into the State. Our Centennial exhibit at Philadelphia will attract general and deserved attention, and very materially assist in directing capital and population to Kansas. Most of our railroads are preparing to advertise the resources of our State systematically and extensively, and two of the lines terminating at this city, the Atchison, Topeka and Santa Fe, and the Central Branch U. P. Companies, will be especially active in this work. There is, too, a better feeling among our people than we have known for years. They are hopeful and confident. They believe firmly in Kansas, they write and talk for the State. All of these things will tell. They will bring capital and people here. The Centennial year, therefore, promises to be a year of extraordinary prosperity and growth for Kansas.—[Atchison Champion.]

A fine stallion being brought to Wichita by Chas. E. Miller, was killed on the railroad near Peoria.

Capt. Connell's train got in from the Indian Territory last Saturday loaded with robes and dry hides.

"Old Hoosier Johnson" sold forty-one hogs last week, for which he received \$500 in cash. Still this is "such a poor country."

An examination of the peach buds in and around Wichita shows promise of an abundant crop. A very small per cent of the buds were injured by the late storms.

It is estimated that ten to fifteen per cent of corn grown in Illinois is yet unharvested. Because of the wet weather and condition of the ground farmers cannot get into the fields with teams to haul it off.

The eastern papers generally admit that the "hard times" will cause an unusually large emigration from the eastern States to the West during the present year. A very large proportion of this emigration will come to Kansas.

We understand that the prospects for an enormous crop of peaches were never better in this part of Kansas, and that, should nothing strange happen, our market will be overstocked next fall. We hope so.—[Concordia Expositor.]

The idea has become prevalent that the peach buds are killed. We have made investigation and are happy to state that we believe this idea is an erroneous one, and that the prospect for a crop in most places is yet good.—[Junction Tribune.]

The Augusta Gazette publishes affidavits to show that Jariel Wilday raised "Gold Drop" wheat on his farm adjoining Augusta, a measured bushel of which weighed 64½ pounds; that 381 bushels averaged 60 pounds to the bushel, and that the said 381 bushels were raised on six and one-fifth acres, making the average 63 bushels and four pounds to the acre.

THE INDUSTRIALIST.

SATURDAY, APRIL 29, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Concerning Hail.

Nature seems to keenly relish a brilliant meteorological sensation. The excessively severe hailstorm of last Saturday evening is a fair sample at hand of her occasional appetite in this particular. A mere down-fall of frozen rain is to be sure in early spring no very startling phenomenon; but when this becomes a genuine hailstorm, with all its boisterous accompaniments, threatening life and property in its violence, we naturally enough begin to look around us for the causes which have brought to pass so unwelcome a visitation.

A very violent hailstorm in the United States is a comparative rarity. While France and Switzerland may expect on an average to look for fifteen good hailstorms a year, an equal territory throughout the central United States would barely receive a fifth of that number during the year. Hence the interest and novelty with which we regard them. The storm of Saturday night was a typical hailstorm in more ways than one. The sultry and oppressive condition of the atmosphere which immediately preceded the storm, was very characteristic and rarely or never fails to herald the coming hail. Then, too, no one could have failed to notice the regular and strongly marked "pulses" which characterizes the movements of all great hailstorms. First a discharge of large, splashing rain-drops, followed by a lull; then a light fusillade of hailstones succeeded by an interval of simple rain, followed by a still more violent and heavy discharge of large hail; and thus through the entire storm.

In size the hailstones of the recent storm were generous, but by no means extraordinary. Not a few were found to measure from an inch and a quarter to an inch and a half through their largest diameter, and some were stated on good authority to have even attained a diameter of two inches. This is but half the diameter witnessed in the great New York hail storm of 1851, when solid spheres of ice were found over four. inches in diameter and weighing one and an eighth pounds. An examination of the hailstone itself will furnish us a very ready clue to the method of its formation, and, indeed, to the whole philosophy of the hailstorm generally. While sometimes almost perfect spheres, these stones are more often flattened or lenticular in shape, and when held between the eye and a lighted lamp they are seen to consist of alternate circular bands of transparent ice and opaque, compact snow, moulded around a central nucleus of the

latter. Now the theory of their formation, to which this unique structure naturally leads us, has been verified by direct observations in hailstorms upon high mountains. The hot, sultry current of air which just precedes the storm is instantly displaced and forced upward by a current of icy coldness which just succeeds the commencement of the storm, forcing the hot column up to an immense height. Here its load of moisture becomes converted, by the intense cold of this high region, into a compact snow-cloud.

Now begins the performance. These cold and hot currents in such close proximity produce throughout this snow-cloud a turbulent whirling motion, by which the flakes of snow are formed into little balls or pellets. By the violence of the agitation these little snow-balls are thrown out into the heated column where they instantly freeze upon their surface a transparent coating of ice. Once more they dart back again into the cloud where more snow is gathered, then again into the warm column where another layer of ice is frozen; and thus on, until the perfect hail, a mass of concentric spheres of pellucid ice and compact snow, is complete. The size and weight of the stone will depend on the length of time it can be maintained within this whirling vortex. When finally it is shot out beyond its influence it falls to the earth, occupying but one or two minutes in passing from a height of five thousand feet.

While the more violent hailstorms of the United States are, by no means, pleasant episodes, they are mere pygmies as compared with the terrible hail tornadoes which annually sweep continental Europe. One of these storms which swept through northern France, destroyed, in nine hours time, property to the value of \$5,000,000. It was the privilege of the writer to witness the effects of a similar storm, which swept over the city of Geneva in the month of June last. Whole vineyards and orchards were utterly stripped of fruit, leaves and bark; cattle were killed; the heavy clay tile with which the houses were roofed lay pounded into brick-dust; and in the city itself the destruction of glass was so great that the glass warehouses of all Switzerland proved inadequate to make good the loss, and Paris and London were called on by telegraph to forward fresh supplies. Little wonder then that many and earnest attempts have been made by scientists to devise some means of protection of life and property against these terrible onslaughts; but thus far with very indifferent success.

To be sure as it has always been noticed that nearly all hailstorms are accompanied by violent displays of thunder and lightning, it became the fashion among savants many years ago to look upon these electrical displays as very important factors, both in the

formation and precipitation of the hail. This was in itself a blunder and the expedient which they based thereon was a worse one. Over a goodly portion of Switzerland "hail rods" were erected around about and through the vineyards. These consisted of tall poles tipped with iron and were destined to tap the hail-cloud of its surplus electricity, thus placing it "hors du combat." But as might be expected this was found to make a bad matter most emphatically worse. Even supposing the electricity to be thus entirely drawn from the cloud, from the rate of its motion it would hurry on and pour down its destruction upon some other unlucky grape-growing individual whose vineyard might be quite as well studded with hail rods as his neighbor in the rear. It was found in fact that the very influence of the presence of these rods actually tempted a hail-cloud to spill its whole cargo over a region which if not thus provoked it might have passed over unharmed. Hence those hail rods came down.

Indeed at the present day it is exceedingly doubtful whether we have the means of providing absolute immunity from these occasional perils of the hail-storm. It only remains for us to amply protect all exposed and fragile property, and thus having accomplished all that actually lies within our power we can simply re-echo the oft repeated sentiment of our litany, "Good Lord deliver us!" —[Prof. Wm. K. Kedzie.

CENTENNIAL ANNIVERSARY.

A Proclamation by the Governor.

STATE OF KANSAS, }
Executive Department. }

WHEREAS, It is deemed proper that the accompanying joint resolution of Congress should be brought directly to the attention of the masses of the people, in order that the necessary steps may be taken to carry out the purposes indicated therein:

Now, therefore, I, Thomas A. Osborn, Governor of the State of Kansas, have directed such resolution to be published herewith, and do recommend to the people of the various counties that measures be taken to carry into effect the patriotic suggestion of Congress, not only that the "Centennial Anniversary of our National Independence" may be properly observed, but that a fitting record of our local progress may be contributed to the general history of the country.

In testimony whereof I have hereunto set my hand and caused the great seal of State to be affixed at Topeka, this 24th day of April A. D. 1876.

THOS. A. OSBORN,

Governor.

[L. S.] THOS. H. CAVANAUGH, Sec'y of State.

Joint Resolution on the Celebration of the Centennial in the various counties or towns.

Be it resolved by the Senate and House of Representatives of the United States of America, in Congress assembled, That it be, and is hereby recommended by the Senate and House of Representatives to the people of the several States, that they assemble in their several counties or towns on the approaching Centennial Anniversary of our National Independence, and that they cause to have delivered on such day an historical sketch of said county or town from its formation, and that a copy of said sketch may be filed, in print, or manuscript, in the Clerk's office of said county, and an additional copy, in print or manuscript, be filed in the office of the Librarian of Congress, to the intent that a complete record may thus be obtained of the progress of our institutions during the first Centennial of their existence.

Approved March 18, 1876.

THE INDUSTRIALIST.

SATURDAY, APRIL 29, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:40 A. M., and 3:37 P. M.
Going West.....	8:05 P. M. and 7:30 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, April 26th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean		Direction.	Veloc.
Thursday...	72°	45°	64.2	30.120	S-W	12
Friday.....	78	54	66.5	29.971	S	16
Saturday....	74	53	61.7	29.430	S	24
Sunday.....	77	52	64.5	29.780	S-W	24
Monday.....	62	40	57.7	30.173	N	12
Tuesday....	66	56	58.7	30.100	S-W	20
Wednesday	85	58	73.5	29.778	S-W	28

Rain-fall in inches, 3.69.

HARRY F. McFARLAND,
Serg't Signal Service.

Number of students enrolled this term 194.

Mr. Carl Kroenke, of Manhattan, has enrolled this week.

Old newspapers, at fifty cents per hundred, for sale at this office.

The attention of builders is called to the advertisement for bids.

Miss Carrie Dearborn, an old student, in company with Mayor Sawyer and Miss Sebia Mudge, made us a pleasant call yesterday.

The annual oration before the Kansas State Agricultural College, will be delivered by Major J. K. Hudson, editor of the Kansas Farmer, Wednesday, May 17th, 1876.

We had the pleasure of a visit from Mr. F. H. Roberts, of the Oskaloosa Independent, who inspected things with the rapidity and fun of an experienced journalist.

We have a fancy for small papers, especially when they are as neat and full as the Blue Rapids Lantern. It is something larger than ours, running four columns to the page.

Tuesday night a four-horse load of torches and a score of glittering horns and melodious gentlemen, collectively known as the Manhattan band, gave us a splendid serenade, for which each particular member of the party will accept our hearty thanks.

In the list of names of those in the printing classes who have worked on the INDUSTRIALIST during the past year, we neglected to mention that of Miss Alice Browning. She is a faithful worker, is improving rapidly, and renders us considerable assistance during her practice hour.

The way the wind sometimes races over this hill and scoots around the buildings is a caution to things in general and to hats in particular. And, in about four years, the way it won't do it will be a luxury; cause why, Prof. Gale has this week planted, clumped, pepper-boxed, broad-casted, etc., etc., enough trees to make the wind rise straight up and wipe its chin, instead of blowing things to pieces—even if three-fourths of the trees planted, clumped, pepper-boxed, etc., as aforesaid, should die. Ah-ha!

There is lots of fun in working for posterity—so much of it that one gets fearfully tired under the burden of bliss. If, ten years hence, that particular individual of posterity who occupies this

palatial band-box, poetically yclept the presidential mansion, doesn't thank us for the clematis, wisteria, ampelopsis, and trumpet-vines, then clustering over these embowered walls, (pull down your vest!) and for the trees serpentined, cork-screwed, wriggled, etc., around these grounds, this week's work is a villainous fraud. Because plowed ground, leafless trees and dry-stemmed climbers don't particularly pay one for the trouble of providing for posterity.

A prominent citizen of Manhattan recently handed us a package of "Merrill's Washing Compound," now being sold in this vicinity, and which is warranted to dispose of a large family washing in an hour's time. The "compound" is simply a crude mixture of ordinary salsoda with a little common alum. It is to be sure not a bad aid in the cleansing of linen; but when, in a flaming advertisement, it is represented as a compound of mysterious powers and sold for a half dollar per pound when it is only worth seven and one-half cents, it smacks strongly of the nature of a quack. We understand that parties within the State have been hoaxed to the tune of fifty dollars for the privilege of a "county right." K.

Since the establishment of the Signal Service Station at the Agricultural College, Kansas has had more rain, in better shape, with larger and harder hailstones, than ever before. As will be seen by our reports, in a few hours last Saturday night the rainfall here was three inches and sixty-nine hundredths. Some of the gentlemen who tussle with the black-hearted Mr. Faber for items would, had they two such facts as these, vigorously proclaim the enterprise of their particular journals in giving to drouthy Kansas such munificent rains and, by consequence, magnificent crops. But the bazoo and trombone business is not to the taste of the INDUSTRIALIST. We never blow. The facts are enough for us. Before we opened this station, the State howled about g-hoppers and drouth; since, everybody is chuckling over the splendid rains. We sit complacently in the sanctum and, with a regal wave of our royal hand, dispense with the ceremony of receiving thanks. Virtue has its own reward.

Special Notices.

The Mechanical Department is manufacturing tables, stands, wheel-barrows, harrows, cultivators, scroll-saws, wall brackets, letter and paper holders, and fancy articles of various kinds, all of which are offered for sale on low terms.

Job work, in shape of metal and wood turning, drilling, light and heavy bracket and scroll-sawing, carving, moulding and pattern making for castings, will be done with neatness and dispatch on reasonable terms. Apply to A. Todd, Sup't.

BONDS.—School District Boards about to issue bonds will remember that we have a new blank made PAYABLE TO ORDER, so that there can be no risk in sending by mail; and that OUR blanks will always have the preference. See advertisement.

BERKSHIRE PIGS FOR SALE.—We have two litters of very handsome Berkshire pigs which will be ready for shipment within the next two months. Orders will be filled in the order in which they arrive. Price, \$10.00 each. Address, E. M. Shelton, Sup't Farm.

The College Farm offers for sale the nicely-bred Shorthorn bull whose pedigree follows:

COLLEGIAN.—Recorded in Vol. 15th, A. H. B.; calved, Oct. 23d, 1875; mostly red; sire, 3d Prince of Oxford, 12676.

1 dam, Grace Young 5th.....by Tycoon, 7339.
2 dam, Grace Young 2d.....by Gallant Duke, 6749.
3 dam, Grace Young.....by Imp. Fortunatus, 1564.
4 dam, Cassy Young.....by Wellington, 2366.
5 dam, Poppy.....by Tom Marshall, 1039.
6 dam, Light Mary.....by Cassock, 3503.
7 dam, Judith Clark.....by Imp. Goldfiner, (2066).
8 dam, Young Mary.....by Jupiter, (2170).
9 dam, Mary.....by Saladin, (1417).
10 dam, Lucy.....by Meek Bull, (2288), &c.

It will be seen that this young bull belongs to the popular Young Mary sort. His dam, Grace Young 5th, sold at public auction in 1873 for \$1,080. Of his sire it will be sufficient to say that he belongs to the Bates family of Fidgets, he being by 1st Grand Duke of Kansas 5731, out of the imported cow, Fidget 6th. Price \$225. Address, E. M. Shelton, Sup't Farm.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Times, ST. MARY'S. Issues an edition of 1,800 every alternate week. Terms reasonable. Address Times, St. Mary's, Kansas. 2-1m

Diamond, JEWELL CITY. Keeps its readers posted in regard to the splendid county of Jewell. \$1.50 per year. M. Winsor, Pub. 2-1m

Tribune, JUNCTION CITY. A 32-column, independent paper. Will be sent three months on trial for 25 cents. Address John Davis, editor and proprietor. 2-1m

Courant, COTTONWOOD FALLS. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 1-1m

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

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Webster Society of the Kansas State Agricultural College. Organized, October 12th, 1868; chartered, January, 1871. Motto: "Labor Omnia Vincit." Meets Saturday evening each week. M. F. LEASURE, President. C. F. TRAVELUTE, Secretary.

Alpha Beta Literary Society.—Organized, October 17, 1868; chartered, December 26, 1870. The Society holds its sessions, in the College building, every Friday afternoon at two o'clock. Both ladies and gentlemen admitted. Visitors always welcome. GEO. A. GALE, President. C. M. GROVER, Secretary.

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To Builders.—Sealed proposals will be received by the undersigned at Manhattan, Kansas, until 5 o'clock P. M., Wednesday, May 10th, 1876, for the erection of one Laboratory and one Horticultural Building. Plans and specifications may be seen, after April 24th, at the office of N. A. Adams, in Manhattan, and also at the office of E. T. Carr, Architect, Leavenworth, Kas.

Bids will be received for the whole work complete, or for stone masonry and excavation in one bid and the balance of the work in one consolidated bid. The right is reserved to reject any or all bids offered.

N. A. ADAMS, Sec'y.

THE INDUSTRIALIST.

SATURDAY, APRIL 29, 1876.

THAT journalistic jewel, the INDUSTRIALIST, has entered on its second volume, a perfect pink in neatness, and containing more valuable reading within a given space than any other paper in the State.—[Blue Rapids Times.]

THE INDUSTRIALIST is fairly jubilant over the fact that it is now a year old. It has indeed been a valuable exchange, as our scissors, could they speak, would strongly testify. Always brimming over with something good put in attractive shape, it is the first to be examined when the day of its arrival comes.—[Junction City Tribune.]

THE charming and attractive little INDUSTRIALIST, published at the Agricultural College, in Manhattan, has seen just a year of existence, and we cordially wish it God-speed. The INDUSTRIALIST has always been regarded as one of our choice exchanges, and we have found nearly every week something in it especially fitted to the wants of our numerous readers. In the language of the venerable Sarpi of Venice, we say to the INDUSTRIALIST "Esto perpetua."—[Ellsworth Reporter.]

WE have heard it said very frequently that the peach crop was killed by the late cold snap, but such is not the case. We have a few peach tree twigs which were plucked from Mr. G. W. Harrison's orchard, and they are full of buds that are alive and almost in bloom. We will have a very good crop in this country after all.—[Lyndon Times.]

We find such paragraphs as this in nearly all our exchanges. It is pleasant to think that we are going to have plenty of fruit.

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English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

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The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

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CALENDAR:—Winter Term began Wednesday, January 5, and closes Wednesday, May 17, 1876.

For further information, apply to
J. A. Anderson, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, MAY 6, 1876.

No. 3.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
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A Man's Work.

How best to utilize human labor, and at the same time to produce the least fatigue, is one of those interesting problems in industrial mechanics which every inventor of machines based on man power as a motor is called upon to consider, and to which every employer of men for the sake of their brute muscular strength is obliged to give some attention. It is a common error to believe that, in order to produce a given amount of work, a man always expends a given amount of power, and to recognize this is the first step toward a correct estimation of a man's muscular capability. Appropriate rests are absolute necessities to the human machine, and it is by intermittent not continuous effort that its best work is produced. One man laboring ten hours and taking intervals of repose will produce more force and accomplish more work with less fatigue than another laboring eight hours with shorter or less frequent rests, the actual time spent in working in both cases being equal. But on the other hand, during the periods of absolute work regularity is a necessity, a fact clearly shown by the government of soldiers on long marches, where the drum to which the feet keep time is a wonderful agent for repressing fatigue, simply because it ensures regularity of motion. So also in rowing a long race, experience has proved the advantage of a clock-work regularity of stroke with a brief breathing-spell between each pull. In fact it appears that men will naturally fall in this cadence, as witness the blows delivered by laborers with sledge-hammers upon rock drills, and the peculiar "hup" which each will aspirate as his implement falls, or the tendency which sailors have to break into a cadenced sing-song when pulling a standing haul on a rope.

A more curious instance in this same regard is found in the power of dancing; nothing but the repeated rests and the regular movements will explain the ability of woman, to whom ordinarily a walk of a mile in length is a severe task, to dance during a period of five or six hours, and this at a time when nature is most exhausted, owing to deprivation of sleep.

The best application a man can make of his power is through his legs, for the muscles of these members are not only absolutely but relatively stronger than those of the arms. In other words, after work, the fatigue produced in both sets of muscles being equal, the leg muscles will have performed more useful labor than those of the arms. And further, the nearer we imitate a natural movement the better do we apply the power, therefore a walking motion of the legs, at a velocity equal to that of an

ordinary gait and applied to levers, is probably the most efficacious application of human force for steady work.

As to the absolute power of a man, expressed in pounds to be lifted or in similar terms, exact data are obviously impossible, even for an average individual. An interesting series of experiments were conducted on this subject some time ago in France, and these, we believe, give a fair approximation. The heaviest load a man of strength can carry for a short distance is placed at 319 pounds. All a man can carry habitually—as a soldier his knapsack—walking on level ground is 132 pounds, and this is an extreme load, we should judge. Or he can carry an aggregate of 1,518 pounds over 3,200 feet as a day's work, under like circumstances. If he ascends ladders or stairs—as do hod-carriers—then he can carry but 121 pounds continuously, and his day's work cannot exceed 1,232 pounds raised 3,200 feet high. With regard to the effort and the velocity which a man can produce by pulling or pushing with his arms, it has been found that, under the most favorable circumstances and for continuous work, an effect exceeding from 26.4 to 33 pounds raised from 1.8 to 2.1 feet per second cannot be gained, and this is equal to about one-eighth horse power.—[Scientific American.]

Women and Engraving.

We find the statement in one of the New York evening papers, that at the present time there are only two women in the United States notable for first-class engraving on steel. One of these, Miss Sartain, learned the art of her father, who is chief of the art department of the Centennial exhibition; the other lady is the wife of Dr. Wormley, of Columbus, Ohio, the author of a work on poisons. Having produced the drawings necessary in the illustration of this volume, there being so many fine lines in them it was found necessary for the artist herself to learn the art of engraving, in order to their production in steel. This true help-meet set about the task, and accomplished it bravely and well. In carving wood for illustrations, more American women are expert than in the art before mentioned; and specimens to be shown in the women's department at the exhibition will, it is confidently expected, be very satisfactory as evidencing the capability of the gentler sex in this department of industry.

We mention these things chiefly to direct the attention of women to the importance of the engraving art, as affording them a light, artistic and remunerative employment. With naturally superior aesthetic perceptions and delicacy of hand, and an increasing need for employment which will bring them independence, there is much to encourage women in the pursuit of this industry, especially as it appears to have been so little practiced by them.

In order to the attainment of a profitable degree of skill in engraving, the most minute and constant attention is necessary. And herein lies a great advantage to those who

undertake it. As we had occasion to say some time ago, in their competition with men in the labor market, women suffer for want of exactness and thoroughness in what they produce. The most carelessly prepared manuscripts submitted to editors and publishers, so far as our experience teaches us, are the work of women. We say not this to the prejudice of the ladies. The necessity which induces so many of them to forego merely domestic employments is a product of but recent developments in the progress of civilization, and it would be strange indeed were they already qualified, in every occupation practicable to them, to claim equality with men and consequently as large remuneration. In distinctly feminine occupations which are not domestic in their character, the market is overstocked, with the effect of enlarging the extent of competition with men. If the ladies make the best use of this seemingly harsh necessity, they will cause it to be profitable to themselves and beneficial to the whole community by choosing their occupation with an intelligent regard to their personal capacity and taste, and by afterwards doing their best to thoroughly perfect themselves in the detail of their art or profession, whatever it may be. By this means they will do much to kill any lingering prejudice against their employment in pursuits hitherto followed not at all or very exceptionally by them, and earn a fair equivalent for their labor, paid without regard to their sex. The average purchaser of work is indifferent as to whether a man or a woman produces it. His exclusive regard is its value to him. It is, however, manifest that if the average of either men's or women's work is lower the one than the other, that the seller who belongs to the sex producing the meaner article, although his or her work may be of surpassing merit, trades at a disadvantage. The ladies must therefore aim to make their average high.—[New York Illustrated Weekly.]

Agriculture for Women.

Before the late civil war in this country, almost the only respectable employments open to women were sewing and teaching. During the contest, however, so many men were absent in the field that necessity compelled women to perform labor which had hitherto been considered wholly masculine. They did their work in so satisfactory a manner that their services were retained after the close of the war. Of course this proved advantageous to working women, though they complain, and not without cause, that they are underpaid simply because they are women. But, so long as plenty of others are eagerly waiting to supersede them, there can be little hope of an advance in wages. The only alternative seems to be in seeking more lucrative positions in the newer and less common fields of labor which are constantly opening to women. Much sense and nonsense has been written about the health and other advantages to be gained by doing housework, but

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, MAY 6, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

WE want a three-line advertisement of every regular paper published in Kansas, for Centennial purposes. Please send copy. No charges to any body.

On Souring of Milk During Thunderstorms.

It is a fact, to the truth of which all housewives will testify, that, immediately after a brilliant display of atmospheric electricity, milk which was sweet before will be found to be sour. The souring of milk is undoubtedly caused by the sugar of milk being changed into lactic acid. But what produces this change in so short a time? Under natural conditions, milk will remain sweet for at least a day, while during a thunder-storm the change will take place in an hour's time.

A great number of reasons have been given for this rapid souring of milk, such as the jarring of thunder, etc. But the simplest explanation was the result of an experiment tried by an Englishman named Andrew Crosse, about fifty years ago. This gentleman was endeavoring to produce quartz crystals by decomposing a silicious solution by means of the electric current. After he had passed electricity through the solution several hours, he was astonished to see small oval bodies covered with bristles moving through the solution, and kicking out in every direction. At first it seemed as though electricity produced life, but further experiments showed that it simply hatched the germs already in the liquid, for if precautions were taken to exclude them no animal life was produced by electricity.

These wonderful experiments set the scientific world to thinking and experimenting; and as the result, Hallier Pasteur and a host of investigators, have shown that the souring of milk is caused by the presence of a large number of minute plants called fungi. The presence of negative electricity is essential to the rapid development of these minute plants. By charging milk with positive electricity, it may be kept sweet for several weeks. This fact may prove to be of practical utility in the arts.

Now, during thunder-storms everything is favorable to the growth of fungi. The air is warm, moist and charged with negative electricity. In a short space of time whole forests spring up in every pan of milk, and succeed in souring the milk and the temper of the housewife.—[Prof. R. F. Kedzie.]

WINSLOW, the Boston forger, has been set at liberty.

Collections for the Centennial.

At a recent meeting of the State Board of Centennial Managers it was decided to arrange for the collection of fruits, vegetables and grains, in their season, during the coming summer, for exhibition at Philadelphia. It is especially desirable to obtain vegetables of extraordinary growth, apples, pears, peaches, and grains both threshed and in the stalk. If fruit-growers, farmers and gardeners will give a little care and attention to this matter, the Kansas Exposition building at Philadelphia will contain an attraction and varied display which will be of incalculable value to the State, in calling public attention to the very best evidences of the adaptability of her soil and climate for the production of these important products.

When the proper time comes for gathering these articles, suitable persons, designated for that purpose, will visit the citizens of such counties as shall in the meantime indicate to this office that they have meritorious specimens to furnish. Due credit will be given in every instance to the grower and locality, and the producer when required will be paid for the collections so furnished.

The hearty co-operation of the people of the State is earnestly solicited. The display at Philadelphia will be a conspicuous success or failure—inaluable or disastrous to the best interests of the State, just in proportion and to the extent this hearty co-operation or lethargy shall prevail.

By order of the Board of Managers.
ALFRED GRAY, Secretary.

Topeka, Kas., April 21, 1876.

To School Teachers.

An examination of candidates for State Diplomas and State Certificates will be held by the State Board of Education, on Tuesday, the 6th, and Wednesday, the 7th, of June next, at the following places, viz.: at Manhattan, in the City High School building, under the supervision of Rev. John A. Anderson, President State Agricultural College; at Emporia, in the Normal School Building, under the supervision of President C. R. Pomeroy, D. D.; at Topeka, in the Capitol Building, under the supervision of the State Superintendent; at Lawrence, in the new University Building, under the supervision of Chancellor James Marvin, D. D.; at Leavenworth, in the Morris School Building, under the supervision of President John Wherrell.

At each of the above-named places, the examination will begin at 8 A. M. Tuesday, 6th June, and close at 6 P. M. Wednesday, 7th June.

QUALIFICATIONS FOR DIPLOMA.

Candidates for a State Diploma.—1. Must have had five years' experience in teaching; 2. Must have taught two years in the State of Kansas; 3. Must produce satisfactory testimonials from reputable persons to whom they are well known, in regard to temper, manners, character and professional standing; 4. Must possess the attainments and professional skill requisite for organizing, superintending and instructing a High School—said attainments and skill to be evidenced by a satisfactory examination, chiefly written and partly oral, in the following branches, viz.:

EXAMINATION FOR STATE DIPLOMA.

1. English—including Reading, Spelling, Grammar and Composition.
2. Geography.
3. Mathematics—including Arithmetic, Algebra through Quadratics and Higher Numerical Equations, Plane and Solid Geometry, Plane Trigonometry.

4. Elementary Natural Philosophy.
5. Descriptive Astronomy.
6. Industrial Drawing—Willson's First Book, and Willson's Guide.
7. United States History.
8. United States Constitution.
9. Physiology.
10. Botany.
11. Elements of Chemistry.
12. Theory and Practice of Teaching.
13. Latin—Grammar, Reader, Composition, Caesar, and Virgil, or equivalents.

QUALIFICATIONS FOR FIVE-YEARS' CERTIFICATE.

Candidates for a five-years' Certificate.—1. Must have had two years' experience in teaching; 2. Must have taught one year in the State of Kansas; 3. Must produce satisfactory testimonials from reputable persons, in regard to temper, manners, character, and professional standing; 4. Must possess the attainments and professional skill requisite for organizing, superintending and instructing a grammar school—said attainments and skill to be evidenced by a satisfactory examination, chiefly written and partly oral, in the following branches, viz.:

EXAMINATION FOR FIVE-YEARS' CERTIFICATE.

1. English—including Reading, Spelling, Grammar and Composition.
2. Geography.
3. Mathematics—including Arithmetic, Algebra through Quadratics, and Plane Geometry.
4. Elementary Natural Philosophy.
5. Industrial Drawing—Willson's First Book, and Willson's Guide.
6. United States History.
7. Botany.
8. Physiology.
9. Theory and Practice of Teaching.

QUALIFICATIONS FOR THREE-YEARS' CERTIFICATE.

Candidates for a three years' Certificate.—1. Must have one year's experience in teaching; 2. Must produce satisfactory testimonials from reputed persons, in regard to temper, manners, character and professional standing; 3. Must possess the attainments and professional skill requisite for organizing, superintending and teaching an Intermediate School, said attainments and skill to be evidenced by a satisfactory examination, chiefly written and partly oral, in the following branches, viz.:

EXAMINATION FOR THREE-YEARS' CERTIFICATE.

1. English—including Reading, Spelling, Grammar and Composition.
2. Mathematics—including Arithmetic, Algebra through Simple Equations.
3. Geography.
4. Elementary Natural Philosophy.
5. Industrial Drawing—Willson's First Book, and Willson's Guide.
6. United States History.
7. Botany.
8. Physiology.
9. Theory and Practice of Teaching.

County Superintendents are respectfully requested to distribute copies of this circular to persons who intend to apply for State Diplomas and State certificates.

By authority of the State Board of Education. JOHN FRASER,

State Sup't of Public Instruction.

Webster Society of the Kansas State Agricultural College. Organized, October 12th, 1868; chartered, January, 1871. Motto: "Labor Omnia Vincit." Meets Saturday evening each week. M. F. LEASURE, President. C. F. TRAVELUTE, Secretary.

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

THE INDUSTRIALIST.

SATURDAY, MAY 6, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:45 A. M.
Going West..... 3:47 P. M.

FREIGHT ARRIVES.

Going East..... 12:15 A. M., and 2:25 P. M.
Going West..... 8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, May 3d, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	75°	58°	64.0	29.786	S-W 20	Fair.
Friday.....	70	44	59.7	30.010	N 12	Fair.
Saturday....	83	50	64.2	29.780	S-W 24	Fair.
Sunday.....	65	49	57.5	29.755	N-E 16	Cloudy
Monday.....	43	38	40.2	30.064	N-W 24	Lt R'n
Tuesday....	57	34	46.2	30.177	N-W 15	Fair.
Wednesday	68	38	58.2	29.737	S-W 28	Fair.

Rain-fall Sunday, 30th inst., .40. Monday, May 1st, .80. Total, 1.20.

HARRY F. MCFARLAND,
Serg't Signal Service.

It rained Thursday and Friday, and is raining to-day.

Mr. and Mrs. Boller, of Junction City, gave us a pleasant visit.

Old newspapers, at fifty cents per hundred, for sale at this office.

The attention of builders is called to the advertisement for bids.

The Board of Regents stands adjourned to meet Tuesday evening, May 16.

Mrs. Werden returns thanks to her pupils for the beautiful music-holder she found hanging in the music room Wednesday morning.

The Hays City Star is received. It is neat and bright, with J. H. Downing editor, whom everybody knows as an experienced newspaper man.

The annual oration before the Kansas State Agricultural College, will be delivered by Major J. K. Hudson, editor of the Kansas Farmer, Wednesday, May 17th, 1876.

BONDS.—School District Boards about to issue bonds will remember that we have a new blank made PAYABLE TO ORDER, so that there can be no risk in sending by mail; and that our blanks will always have the preference. See advertisement.

The Enterprise is a new Manhattan paper, published by Patee & Runyan, with Mr. Runyan as editor. It is well-gotten up and the young gentlemen interested promise to give subscribers full value for their money. They are able to do so.

The sermon to the graduating class will be delivered in the Presbyterian church, Sunday, May 14, at 8 p. m. The Under-graduates' Exhibition will be held in the Presbyterian church, on Tuesday evening; and the Commencement exercises on Wednesday evening at same place. The annual address will be delivered by Major J. K. Hudson, editor Kansas Farmer.

The term examinations will be held as follows, on Monday, Tuesday and Wednesday, May 15th, 16th and 17th. The first hour classes will be examined on Monday from 8:40 to 10:20, and the second hour classes from 10:20 to 12:50. The third hour classes on Tuesday from 8:40 to 10:20, and the fourth hour classes from 10:20 to 12:50. The fifth hour classes on Wednesday from 8:40 to 10:20.

Students' Column.

E. D. Rose, a former student at the College, called on his friends here last week. Old students speak quite highly of his career while attending College.

The Alpha Beta Society met as usual last Friday afternoon and, after transacting some business, adjourned to meet the first Friday afternoon of the next school year.

Miss Ella Gale, who has been quite ill, is recovering her usual good health. We trust and believe that she will be able to take her place in the closing scenes of this school year and her school life.

Some time ago Prof. Gale ordered from the firm of R. Douglas & Sons, Waukegan, Illinois, for his own use, a bill of trees, consisting of several varieties of Evergreens. The Professor stated in the order the amount he desired to expend for this purpose. He was surprised, to say the least, a few days ago, upon receiving a large and well-selected assortment of trees, exceeding his order by about forty dollars. And his consternation and gratitude were still greater when he found that the firm had drawn upon him for only the amount specified in the order. Such a mark of esteem is worth something, and is a much better token than complimentary or congratulatory letters, for "Actions speak louder than words."

April and her showers have passed, but during that transition all nature seemed to start afresh from its winter home. The hills, valleys and fields, although not yet entirely capped in nature's green, show forth the milder workings of a nature's God. But why speak of the past, it can not be renewed; a moment idled away is lost forever. Then the present and future deserve our only notice. That present is the first of May; the future is all time to come.

May starts out robed in nature's beauty, and ere the month has passed the very earth will tremble beneath its burden of living foliage. The many birds from their aerial heights will warble their notes of praise to all below, and the rolling hills and fields will quietly rest beneath their carpet of green. Ere long the fragrance of the flowers, too, will be wafted by the morning breeze to all around.

And yet, were it not for all this to prove to us that spring is here, we would know that May had come because of the rappings at the door of S. C. Shuemaker's room. They brought him forth, when, behold, upon the knob there hung a basket trimmed in all the beautiful and varied forms which human art can devise. S. returns his thanks to the person or persons, whomsoever they may be, for the handsome May basket. JEAN.

Monday was the first of May. What a dull, dreary day it was. Mud something less than fifty feet deep; the wind blowing from the north and, taken altogether, it was very unlike what the first of May usually is. That night, just as we were about retiring, a loud rapping at the door surprised us. Having locked up the house we did not respond, and hearing no more noise we thought no more about the matter. Next morning, however, on opening the door we were astonished to behold a most beautiful May basket hanging on the knob by a piece of the very finest of ribbon. It was filled with the choicest of flowers, placed stems upward so that the sun might not wilt the flowers should it happen to rise before the basket was taken in. It was covered with very beautiful pictures and addressed to Miss Bljsie C—. Now, if the editor can tell to whom this basket should go I would like to have him do so, for on account of its great beauty it should certainly be given to the one for whom the giver intended it.

This beautiful basket was constructed from a Harper's Weekly and filled with sticks and roots. There were a great many tracks around the house that morning; some of them perhaps a little less than eighteen inches broad. It seems that the individual who hung this basket upon the door-knob had a pretty serious time in getting away, for he ran into the gooseberry patch and into mud so deep that one could scarcely pick his way through in day-time.

STUDENT.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Times, St. Mary's. Issues an edition of 1,800 every alternate week. Terms reasonable. Address Times, St. Mary's, Kansas. 2-1m

Journal, Osage Mission. C. H. Howard, editor. Published every Wednesday at Osage Mission, Neosho county, at \$2 per annum. 3-1m

Sentinel, Lawrence. The only temperance paper in the West. Published weekly; terms, \$2 per year. D. C. Beach, Publisher. 3-1m

Diamond, Jewell City. Keeps its readers posted in regard to the splendid county of Jewell. \$1.50 per year. M. Winsor, Pub. 2-1m

Tribune, Junction City. A 32-column, independent paper. Will be sent three months on trial for 25 cents. Address John Davis, editor and proprietor. 2-1m

News, Emporia. Is one of the oldest papers and one of the best advertising mediums in the West. Send for specimen copy. Stotler & Graham, Proprietors. 3-1m

Courant, Cottonwood Falls. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 1-1m

Union, Junction City. Thirty-two columns. Fifteen years under one management. Brevity, Variety, Spice, Fearlessness, and an enthusiastic, vigorous and enterprising devotion to the best interests of the people (and especially our own) characterize it. Geo. W. Martin, editor and proprietor. 3-1m

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Physician and Surgeon.—L. J. Lyman, M. D. Prompt attention given to calls, day or night. Office and residence No. 27, Poyntz Avenue, Manhattan. 37-3m

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan. 37-3m

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

Alpha Beta Literary Society.—Organized, October 17, 1868; chartered, December 26, 1870. The Society holds its sessions in the College building, every Friday afternoon at two o'clock. Both ladies and gentlemen admitted. Visitors always welcome. GEO. A. GALE, President. C. M. GROVER, Secretary.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

To Builders.—Sealed proposals will be received by the undersigned at Manhattan, Kansas, until 5 o'clock P. M., Wednesday, May 10th, 1876, for the erection of one Laboratory and one Horticultural Building. Plans and specifications may be seen, after April 24th, at the office of N. A. Adams, in Manhattan, and also at the office of E. T. Carr, Architect, Leavenworth, Kas.

Bids will be received for the whole work complete, or for stone masonry and excavation in one bid and the balance of the work in one consolidated bid. The right is reserved to reject any or all bids offered.

N. A. ADAMS, Sec'y.

[Concluded from first page.]

unless public opinion changes very much, no considerable number of our intelligent countrywomen will be found ready to perform the labor of a servant in anybody's house but their own. Yet we believe that more money, health and contentment are sacrificed every year because women insist upon some so-called genteel occupation, than for any other reason. The lighter kinds of agricultural labor, such as bee-keeping, poultry-raising, gardening and flower culture seem particularly suited to women; either of them could be carried on without more physical endurance than is required to enable one to stand behind a counter or run a sewing machine from morning till night. In all such work, as in almost nothing else, a woman receives for her labor compensation as generous as that given to her stronger brother.

To succeed in agriculture, as in more pretentious pursuits, one needs to possess knowledge, skill and a degree of business capacity; but almost any thoughtful, intelligent woman may acquire these by giving careful attention to the details of the special business she intends to follow. We recently learned of the success of two California ladies who had worn themselves out by constant teaching. They saved money enough to buy two hundred swarms of bees, and with this stock began to raise honey for the market. The first year they cleared three thousand dollars, besides gaining much valuable information about the best honey-producing plants. Last year they planted all the mignonette seed they could obtain, and this year they intend to plant two acres with this flower alone. Other ladies in different sections of the country have been equally prospered in the same industry, and we hope it may be undertaken by many more of the weary, heavy-eyed, hopeless looking women whom we see daily passing to their ill-paid toil. Of the other occupations which we have mentioned we shall speak another time, when we have more space than now.—[New York Illustrated Weekly.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The winter term began Wednesday, Jan. 5, and closes Wednesday, May 17, 1876.

The Nationalist.—A Republican Reform weekly, published at Manhattan, Kansas. Contains reports of Bluemont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year, strictly in advance to all except those living in the vicinity of Manhattan.

49-tf

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects imminical to the Kansas Farmer.

The College Farm keeps on hand and usually for sale specimens of Shorthorn Galloway, Jersey and Devon Cattle, and Essex and Berkshire Swine. We offer for sale one yearling bull and one two-year-old Devon bull, and two Devon cows respectively three and four years old. All imported from Canada. Price, each, \$100. Address E. M. Shelton, Sup't Farm.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf

GEO. W. MARTIN, Publisher.

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

School District Bonds.—Several thousand dollars in School District Bonds wanted March 1st, for which the highest prices will be paid. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. For prices and blanks, address

E. GALE, Loan Commissioner,
Manhattan, Kan.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography, Household Chemistry. Special course in Chemistry for Post-Graduates. The Laboratories are fully furnished with the best philosophical apparatus and the largest assortment of chemical apparatus and reagents west of the Alleghenies, all of which is for the use of the students.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

MECHANIC'S.

To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

WOMAN'S.

The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

• TUITION ABSOLUTELY FREE! •

No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR.—Winter Term began Wednesday, January 5, and closes Wednesday, May 17, 1876.

For further information, apply to
J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, MAY 13, 1876.

No. 4.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Educational Fund.

[Extract from speech of Hon. Justin S. Morrill, of Vermont, in the Senate, April 26, 1876.*]

Mr. PRESIDENT: The measure I have called up to-day has for its object the aid of common schools and some further assistance to the national colleges. Other propositions are pending, both here and in the other House, in relation to this subject; but with all earnest men, if the leading purposes mentioned can be secured, the details will be of minor importance.

I start with the proposition that all of our public lands, which are hereafter to be sold and are not called for as free homesteads, should be held exclusively for educational purposes — purposes that tower high above and dwarf all others. Should any exception to this rule ever be suggested, let it then be considered on its merits.

SCHOOL LANDS DONATED.

We have already given to States, without regard to their population, 140,000,000 acres of land for the support of common schools, and eighteen of the States thus aided have a school fund of \$43,866,785. The western or new States, as to common schools, would appear to have been liberally provided for. In the North and East the system of common schools has long held a foremost place in the hearts of the people, and cheerful contributions to their support by self-imposed taxation are made with all the regularity of the seasons. At the South they are far less advanced, and having no accumulated school funds, their people are at present unequal to the task of establishing and adequately maintaining such schools without some national assistance, not national control, although not unmindful of their utility and fully appreciating their urgent necessity. When even in Spain it is no longer immoral for women to know how to read, and when Sweden and Turkey engage in universal education, no American State will be found to hold back.

All statistics are dry—interesting to few and entertaining to none—and some are by no means pleasant or even tolerable to contemplate; but legislators, like surgeons, must probe the ugliest sores, and courageously examine even such facts as those I am reluctantly about to expose.

SCHOOL POPULATION.

Our school population of five years of age

*The Senate had under consideration, as in Committee of the Whole, the bill (S. No. 334) to establish an educational fund and apply a portion of the proceeds of the public lands to public education, and to provide for the more complete endowment and support of national colleges for the advancement of scientific and industrial education.

to seventeen inclusive is 12,055,443, or nearly one-third of our entire population. A mighty host, led now and controlled by us, but soon to control us and lead the van of civilization in the land of their fathers. Only about one-half of this number, or 6,545,112, attend school of any sort, and among all of the four or five million of colored population only 180,272 attend school, or hardly enough to furnish a silver lining to a cloud so dark. Five million and a half of our population cannot write and four million and a half cannot read. Of illiterate male adults, twenty years of age and over, we have 1,611,213, of which number 748,470 are whites. There are thus more illiterate voters, among either white or colored, than the usual majority of any party taking part at any national election. They are, therefore, the potent auxiliaries of all parties, the decisive make-weights, and must more or less control the destinies of the country. Can any happy augury of ages to come be drawn from these dismal facts? "Do men gather grapes of thorns?"

The liberty and equality of an immense number of illiterate people, unmarked by intellectual eminence of any sort, empty of all virtuous gratitude springing from the memoirs of childhood and the school-room toward a parental government, is not such a state or condition as freemen toil for, nor such as they can be expected to maintain, love, and cherish. Along with entire liberty and equality before the law we behold among mankind the foremost and the hindmost as well, and there will be distinctions and differences in both the power and industry of mankind, and both of hand and brain, with no two alike among them all, good or bad. It should be the mission of American legislators to offer sure means for the greatest possible development of this power and industry, and to diminish inequality by leveling upward and not downward. Thus only shall we be able to prove that republican institutions, quick to perceive and to foster the most exalted personal merits and qualifications, will neither dwarf the State nor the people. Thus only shall we show that our boasted equality is not inferiority to everybody else.

The several States are greatly interested in the removal of the deep-seated illiteracy to which I have referred, but by no means exclusively, as the interest of the General Government covers the same territory and embraces all and the same voters. The election of President of the United States and of members of Congress cannot be reckoned as less grave and important work than that of State governors and Legislatures. The parts are not greater than the whole.

Through the latest action of the people upon the national Constitution we have bestowed universal suffrage upon our fellow-citizens in all of the States. The nation is primarily responsible for this action, and, while accepting of its advantages, must shield itself as well as the States from the resulting possible perils. The increased magnitude of the burden which has been

imposed by the sovereign will of the nation manifestly ought to be borne by the nation. Universal suffrage must be made a blessing and an honor to our country, not a curse to the citizen, nor to the State and the nation. Every one of our citizens has been crowned with equal power in the guidance of national and State affairs; but they have thus far had too little of our aid to fit them even to guide themselves. Many of the States resolutely assume their full share of the great responsibility, and raise by taxation and expend nearly \$100,000,000 annually for common schools; and, when so much more is obviously required, shall the General Government look on with total indifference, contributing nothing?

How to Get Rid of Flies.

The Rev. George McAree Drought, writing from Ireland, says: "For three years I have lived in a town, and during that time my sitting-room has been free from flies, three or four only walking about my breakfast table, while all my neighbors' rooms were crowded. I often congratulated myself on my escape, but never knew the reason of it until two days ago. I then had occasion to move my goods to another house, while I remained on for two days longer. Among other things moved were two boxes of Geraniums and Calceolaries, which stood in my window, the window being always open to full extent, top and bottom. The boxes were not gone half an hour before my room was as full of flies as those around me. This, to me, is a new discovery, and perhaps it may serve to encourage others in that which is always a source of pleasure, and which now proves also to be a source of comfort, viz: window gardening." — [London Gardener.]

How to Bottle Light.

Countless accidents, as every one knows, arise from the use of matches. To obtain light without employing them, and so without the danger of setting things on fire, an ingenious contrivance is now used by the watchmen of Paris in all magazines where explosive or inflammable materials are kept. Any one may easily make a trial of it. Take an oblong phial of the whitest and clearest glass, and put into it a piece of phosphorus about the size of a pea. Pour some olive oil, heated to the boiling point, upon the phosphorus; fill the phial about one-third full and then cork it tightly. To use this novel light, remove the cork, allow the air to enter the phial, and then cork it. The empty space in the phial will become luminous, and the light obtained will be equal to that of a lamp. When the light grows dim its power can be increased by taking out the cork and allowing a fresh supply of air into the phial. In winter it is sometimes necessary to heat the phial between the hands to increase the fluidity of the oil. The apparatus thus prepared may be used for six months. — [Cassell's Magazine.]

WILD plums promise to be very abundant all over the State this season.

THE INDUSTRIALIST.

SATURDAY, MAY 13, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE next Term begins Thursday, August 24th, 1876.

WE want a three-line advertisement of every regular paper published in Kansas, for Centennial purposes. Please send copy. No charges to any body.

FOR the last three years we have been absorbed in the work of this Institution, and neither in term time nor vacation have "let up" any consecutive ten days. The coming three months we propose to spend in the East. During that time the INDUSTRIALIST will be conducted by the Associate Editors, a fact on which we very heartily congratulate both our readers and ourselves!

THE Centennial issue of the Junction City Union is the best historical paper we have ever read. It may be that our former citizenship in that place influences this opinion, and we know that a warm love for George W. Martin is very apt so to do; nevertheless, we doubt if the local history of any other county has been so fully set forth. It should be printed in pamphlet form; Junction should pay for it; and we will stand our share of the expense.

The Educational Conflict.

The establishment of agricultural colleges, induced by the congressional endowment, necessarily introduced a new element into the American educational system. This system was devised for the training of those who designed to enter the professions, and its methods were framed accordingly. Any system squarely designed for the education of farmers or mechanics should logically differ from the former just to the extent that the kind of skill used by the farmer differs from that used by the lawyer. Though this principle is but the simplest teaching of common sense, Kansas, so late as 1873, was the first State to declare and adopt it in the conduct of its Agricultural College.

Nor is it strange that the principle should not have been sooner recognized, because no force save that of failure was sufficient to convince men that the accepted course of instruction designed for "the learned" was not equally adapted to the wants of the industrialist. In all of the States the Congressional endowment was either seized upon by existing professional colleges as a means of support, or else was managed by professional educators on the supposition that a farmer should be educated exactly as the lawyer with, perhaps, agriculture added. The inevitable consequence was

that both of these classes of institutions found their graduates entering professional instead of industrial vocations; and no amount of complaint by the people nor of pressure by faculties could prevent such a result. The agricultural colleges of Michigan and Massachusetts are the most notable exceptions to this general statement, and for the reason that they were from the outset designed for the education of farmers alone. We regard the former as the most successful of the forty congressional institutions, because, as compared with the rest, it has been the most practical. Still, as a matter of judgment, we will risk the prediction that, ten years hence, each of these will have adopted the main features of the Kansas plan, and that, as regards the other agricultural colleges, they will have been forced into its adoption by the demands of the people.

Nor will the conflict between industrial and professional education be confined to colleges. Sooner or later it will be transferred to the common schools, for the evident reason that, in so far as the aims and methods of these systems really differ, there is greater justice in shaping the people's school for the direct benefit of the ninety-seven industrialists than for that of the three who will enter the professions.

Sheep Husbandry in Kansas. No. 5.

In previous articles under the above caption we have urged the use of the ordinary Missouri ewe or the grade Merino as the foundation of the flock. It is but fair to say, however, that a large number of successful sheep-raisers, both in this State and Colorado, contend, and with very good reasons, that the Mexican ewe is the safest and best sheep for beginners. They agree that Mexican sheep endure hardships much better than those of the East; are more prolific and much less liable to disease; and, after two or three crosses of Merino rams, they combine the hardihood of the Mexican sheep and the shearing qualities of the Merino in a greater degree than any other cross.

It must be confessed of the Merino that it is not as prolific as the Mexican and long-wooled sorts, besides being somewhat delicate in the young state. While the breeders of Mexican and long-wooled sheep confidently count on an annual increase of one hundred to one hundred and twenty-five per cent, the number of Merino lambs rarely exceeds seventy-five per cent of the number of ewes. We subjoin an extract from a letter giving a very interesting experience with an inferior lot of Mexican ewes:

"On the first of November, 1874, I purchased two hundred Mexican ewes, the culs of a flock of four hundred ewes. Upon these I have used Merino rams and am satisfied that this is the best cross for Mexi-

can sheep. My increase of lambs was two hundred and fifty, and of these I raised two hundred and twenty-five, the loss being unusually large from the fact that during the lambing season I was not prepared to give them the necessary care and attention. During the latter part of the year ten of the ewes died of old age. My June clip of 1875 was six hundred and sixty-six pounds.

So far this winter I have not fed my sheep any hay or grain, and they are in much better condition than at this time last winter. Last winter was unusually severe for this climate and I fed the two hundred ewes one hundred bushels of corn and four tons of millet. Last season I received for my unwashed wool at home twenty-five cents per pound. V. HARBOUGH.

Bunker Hill, January 17th, 1876.

Coffey county bids fair at no distant day to become the famous wool-growing county of the State, if it is not such already. It might be expected that a people who have obtained railroads without being placed under bonds therefor, and generally substantial improvements without those substantial reminders—taxes, would be alive to their best interests as farmers. We have space for an extract from a single communication received from this county:

"I am satisfied that there is no kind of stock in Kansas that will pay as well as sheep, if cared for as they need. I have been in the sheep business in this country for six years, and now own eleven hundred head of grade Merinos. These sheep I find the most profitable because they are hardier, do better in large flocks, and shear more pounds of wool than any other grades. Last year I received 26 $\frac{1}{2}$ cents per pound for my unwashed wool. My sheep have not been troubled with disease except a few which were exposed to the scab, and these I readily cured with two applications of a strong decoction of tobacco.

My annual increase is about fifty per cent of my flock. With sheds I could do much better than this. I prefer to have the lambs dropped in March for two reasons: you can have them at your command and keep the lambs with their mothers much better than than when they are out on the prairie, and early lambs grow larger and are easier wintered than those coming late in the season."

In leaving this subject we cannot forbear the remark that the indirect advantages of wool-growing to the Kansas husbandman are as important as the direct advantages which we have considered. If Kansas is ever to keep equally clear of the effects on the one hand of those grievous ills drouth and grasshoppers, and on the other granaries bursting with produce hardly marketable from its exceeding cheapness, it will be done by better farming, by raising a greater variety of products, by more liberal manuring; and when we talk of manuring how shall we accomplish it without sheep? Moreover, the harvest of the wool-grower comes at that season of the year when the farmer has least to sell, and when his expenses are greatest. Putting together the known facts brought out by the experience of Kansas wool-growers and those facts which appear from a general and theoretical consideration of the subject, and it seems to us that in the near future Kansas will take a position with Michigan and Ohio among the great wool-growing States. —[Prof. E. M. Shelton.]

THE INDUSTRIALIST.

SATURDAY, MAY 13, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:45 A. M.
Going West..... 3:47 P. M.

FREIGHT ARRIVES.

Going East..... 12:15 A. M., and 2:25 P. M.
Going West..... 8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, May 10th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	54°	36°	43.2	29.708	N-W 24	Lt R'n
Friday.....	52	40	46.2	29.775	N 12	Hy Rn
Saturday....	60	44	49.2	29.405	N-E 24	Hy Rn
Sunday.....	55	38	46.0	29.954	W 36	Cloudy
Monday....	65	39	54.2	30.031	S-W 4	Clear
Tuesday....	78	42	64.0	29.853	S-W 16	Clear
Wednesday	79	57	69.0	29.894	S-W 16	Clear

Rain-fall in inches, 3.06.

HARRY F. McFARLAND,
Serg't Signal Service.

Old newspapers, at fifty cents per hundred, for sale at this office.

The Board of Regents stands adjourned to meet Tuesday evening, May 16.

Students are preparing to say that parting word, "Good-bye." May they enjoy the vacation.

The Kansas Pacific will sell trip tickets to Wamego and return during the Normal Institute, for one and a fifth fare.

The sermon to the graduating class will be delivered by the President, at the Presbyterian church, next Sunday evening.

The music for the Under-graduates' Exhibition will be furnished by the students, and the Manhattan Band has kindly consented to provide music for the Commencement exercises.

BONDS.—School District Boards about to issue bonds will remember that we have a new blank made PAYABLE TO ORDER, so that there can be no risk in sending by mail; and that our blanks will always have the preference. See advertisement.

Judge Harper handled some of the Virginia Creeper, five-leaved ivy, and was poisoned by it.—[Nationalist.]

If by "five-leaved ivy" is meant the ampelopsis, of which we wrote a few weeks ago as a "labor-saving climber," we will repeat the statement that it can't poison any body a bit more than sugar can. Very often, however, the poison vine grows with it, and it is difficult to obtain the one without touching the other, unless care be used. Our friend Judge Harper was poisoned in this way and not by the ampelopsis.

The proposals for the erection of the Chemical and Horticultural buildings were opened last Wednesday in the presence of the bidders. Those for the whole work were as follows: McGonigle, Leavenworth, \$14,243; Anderson & Liddell, Leavenworth, \$13,800; Winne, Smith & Hurlburt, Manhattan, \$13,295; Sam'l Rains, Manhattan, \$11,984. There were bids for different portions of the work from Patterson, Flanders and Winne. After an accurate calculation by the architect, E. T. Carr, of Leavenworth, he reported the lowest bids as that of Jacob Winne for the masonry, \$4,693, and of Sam'l Rains for the carpentry, \$7,164, aggregating \$11,857. The Board of Regents will close the contracts next week, and the work be commenced immediately.

Fares on the Kansas Pacific were reduced, May 1st, from this station, as follows:

STATIONS.	Old Rate.	New Rate.
Kansas City.....	\$ 6 00	\$ 5 40
Leavenworth.....	6 00	5 40
Lawrence.....	4 50	3 90
Topeka.....	3 15	2 60
St. Mary's.....	1 70	1 45
Wamego.....	85	75
Ogden.....	65	50
Junction City.....	1 20	95
Abilene.....	2 70	2 20
Salina.....	4 05	3 30
Las Animas.....	29 15	24 75
Denver.....	35 00	30 40

Programme.

The Term examinations will be held in the several recitation rooms as follows:

MONDAY.

8:40 to 10:20.—Geometry, Industrial Drawing, Chemical Physics, Practical Agriculture, U. S. History, Carpentry, Scroll-sawing, Printing, Telegraphy and Music.

10:20 to 12:50.—English Structure, Industrial Drawing, Chemical Analysis, Political Economy, German, Carpentry, Scroll-sawing, Sewing, Printing, Telegraphy and Music.

TUESDAY.

8:40 to 10:20.—Logic, Industrial Drawing, Elementary Physics, Drill in Arithmetic, Carpentry, Scroll-sawing, Sewing, Printing, Music, Telegraphy.

10:20 to 12:50.—Mechanics, Entomology, Meteorology, Arithmetic and Book-keeping "A," German "A," Carpentry, Scroll-sawing, Sewing, Printing, Telegraphy, Music.

WEDNESDAY.

8:40 to 10:20.—English Structure, Botany, Arithmetic and Book-keeping, French, Carpentry, Scroll-sawing, Sewing, Printing, Music, Telegraphy.

The Under-graduates' Exhibition will be held at the Presbyterian church, Manhattan, Tuesday evening, May 16th, beginning promptly at eight o'clock railroad time. The speakers will represent the society by which they were chosen. The order of exercises will be as follows:

MUSIC.

INVOCATION.

MUSIC.

DIAGNOTHEAN SOCIETY.

"Kansas and its Industries," MR. A. R. OURSLER.

"Moral Courage," - MISS ELLA M. WINNE.

MUSIC.

ALPHA BETA SOCIETY.

"Christianity as a Civilizer," MR. J. S. GRIFFING.

"Use and Beauty," - MISS ESTHER E. EVANS.

MUSIC.

WEBSTER SOCIETY.

"Daniel Webster," - MR. M. F. LEASURE.

"The Growth of Ideas," - MR. L. B. ROGERS.

MUSIC.

The Commencement exercises will take place Wednesday, May 17, 7:30 P. M., at the Presbyterian church. The programme is as follows:

MUSIC.

INVOCATION.

Oration—"Brains in Agriculture,"

MR. GEORGE A. GALE.

Oration—"Still Better Things to Come,"

MISS CARRIE M. KIMBLE.

MUSIC.

Oration—"Our Lives," MISS NELLIE SAWYER.

Oration—"Beauty and Science in Real Life,"

MISS ELLA M. GALE.

PRESENTATION OF DIPLOMAS.

MUSIC.

Annual Address,

- MAJOR J. K. HUDSON.

MUSIC.

The last meeting of the Webster Society was enough to confirm the faith of the most incredulous in its stability. While there is a general lack of interest among the students in everything else connected with the College, owing to its being so

near the close of the term, the members of the Webster still evince that energy which has always been a prominent characteristic of the society.

The debate was participated in by all present. The written debate, by Messrs. Hodges and Bletcher, was excellent; in fact, from the short experience the society has had with written debates, they have been found to be much better than the old method of "composition." REPORTER.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Blade, TOPEKA. Daily, \$3.00 a year; weekly, 50 cents. The only positively independent paper in Kansas. 4-1m

Patriot, ATCHISON. Established in 1867. The only Democratic daily in Kansas. Park & Vandegrift, Proprietors. 4-1m

Times, ST. MARY'S. Issues an edition of 1,800 every alternate week. Terms reasonable. Address Times, St. Mary's, Kansas. 2-1m

Courier, WINFIELD. Republican; weekly. Official county paper. No more subscribers needed. E. C. Manning, Publisher. 4-1m

Sentinel, LAWRENCE. The only temperance paper in the West. Published weekly; terms, \$2 per year. D. C. Beach, Publisher. 3-1m

Journal, OSAGE MISSION. C. H. Howard, editor. Published every Wednesday at Osage Mission, Neosho county, at \$2 per annum. 3-1m

Diamond, JEWELL CITY. Keeps its readers posted in regard to the splendid county of Jewell. \$1.50 per year. M. Winsor, Pub. 2-1m

News, MARYSVILLE. A 28-column paper; \$2.00 per year. Only paper at county seat, and devoted to local affairs. T. Hughes, Editor.

Appeal, LEAVENWORTH. Independent Democratic. Published daily, except Sunday. \$5.00 a year. W. W. Embry, Editor and Proprietor. 4-1m

Free Press, OSAGE CITY. Largest paper in Kansas. Published in the great central coal region of Kansas. W. H. Morgan, Editor and Proprietor. 4-1m

Tribune, JUNCTION CITY. A 32-column, independent paper. Will be sent three months on trial for 25 cents. Address John Davis, editor and proprietor. 2-1m

News, EMPORIA. Is one of the oldest papers and one of the best advertising mediums in the West. Send for specimen copy. Stotler & Graham, Proprietors. 3-1m

Times, CHANUTE. A. L. Rivers, Editor and Proprietor. Published at Chanute, Neosho Co., Kansas, the crossing point of the L. L. & G. and M. K. & T. railroads. 4-1m

Mirror, MINNEAPOLIS. A monthly land journal devoted to the interests of the Solomon Valley. Subscription, 25 cents. Sample copies free. C. C. Olney, Editor. 4-1m

Kansan, NEWTON. Published every Thursday. Two dollars per annum. Twenty-eight columns. Republican in politics. H. C. Ashbaugh, Editor and Proprietor. 4-1m

Times, BLUE RAPIDS. Twenty-eight columns. Published at the principal manufacturing town of the State. Only home publication in Marshall county. Terms, \$2.00 a year. C. E. Tibbets, Proprietor. 4-1m

Nationalist, MANHATTAN. A Republican Reform weekly. Contains reports of Belmont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year. A. Griffin, Editor and Proprietor. 4-1m

Courant, COTTONWOOD FALLS. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 1-1m

Union, JUNCTION CITY. Thirty-two columns. Fifteen years under one management. Variety, Spice, Fearlessness, and an enthusiastic, vigorous and enterprising devotion to the best interests of the people (and especially our own) characterize it. Geo. W. Martin, editor and proprietor. 3-1m

THE INDUSTRIALIST.

SATURDAY, MAY 18, 1876.

Students Enrolled Since Jan. 5, 1876.

NAME.	COUNTY.
Anderson, Bernhard	McPherson.
Arnold, Joseph F.	Indiana.
Bayles, John	Riley.
Beckwith, Weldon E.	Wabaunsee.
Benjamin, Emery W.	Atchison.
Blain, Arthur T.	Riley.
Bletcher, Frederick	Marshall.
Boies, Frank	Jefferson.
Boley, Mary A.	Pennsylvania.
Brady, Louis R.	Riley.
Branson, Martin H.	Greenwood.
Branson, Samuel F.	Greenwood.
Brown, Mark L.	Riley.
Brown, Ada E.	Riley.
Browning, Alice M.	Riley.
Browning, Emma E.	Riley.
Browning, Lois	Riley.
Buel, George K.	Wabaunsee.
Buel, Warren C.	Wabaunsee.
Burnham, Wm. P.	New Mexico.
Burroughs, Frank C.	Riley.
Burroughs, Lettie M.	Riley.
Campbell, Ettie A.	Riley.
Campbell, Florence	Riley.
Child, Ella	Riley.
Clark, Anna C.	Riley.
Craig, Sarah	Paint Co., Mo.
Crowl, Florence	Pottawatomie.
Crowl, Jessie C.	Pottawatomie.
Davidson, Geo. K.	Riley.
Delahay, Charles	Leavenworth.
Dellinger, Jno. F.	Linn.
Dow, Chas. A.	Coffey.
Dutcher, Jay	Riley.
Eells, Allan B.	Riley.
Eells, Hattie M.	Riley.
Elliott, Willard S.	Riley.
Ellsworth, Miles	Atchison.
Emmons, Joseph N.	Pottawatomie.
Engle, Charles E.	Riley.
Engle, Laura E.	Riley.
Ensign, Ellen J.	Wabaunsee.
Ensign, Francis	Wabaunsee.
Evans, Esther E.	Plainfield, Ill.
Failyer, Geo. H.	Cherokee.
Failyer, Mariam	Cherokee.
Failyer, Miriam	Cherokee.
Fay, Chas. W.	Johnson.
Flack, Jno. B.	Dickinson.
Fletcher, Ellen	Riley.
Foster, Walter E.	Osborne.
Fraunberg, Wm. S.	Labette.
Fuller, A. P.	Franklin.
Gale, Ella M.	Riley.
Gale, Geo. A.	Riley.
Garrett, Nina	Wyandotte.
Gibbon, Jno. W.	Coffey.
Gillett, Chas.	Pottawatomie.
Griffing, Jno. S.	Riley.
Griffing, Wm. J.	Riley.
Grover, Chas. M.	Nemaha.
Grover, Ella	Pottawatomie.
Grover, Mary A.	Pottawatomie.
Haines, Harvey F.	Riley.
Haman, Frank	Riley.
Harding, L. A.	Riley.
Harding, Rowanna	Riley.
Harding, Rowena M.	Riley.
Harmon, Webster	Jefferson.
Harper, Josephine C.	Riley.
Haun, Jno. C.	Harvey.
Hennings, Clarence H.	New York.
Hibbard, Alice	Riley.
Higinbotham, G. A.	Riley.
Hodges, S. R.	Coffey.
Houston, Chas. S.	Riley.
Houston, Grant U.	Riley.

Houston, L. N.	Riley.
Howard, Jasper M.	Riley.
Hoyt, Kate	Riley.
Hughes, Frank	Leavenworth.
Hulett, Turner C.	Johnson.
Hurlburt, Alice M.	Lyon.
Humphrey, Carrie E.	Davis.
Humphrey, Louis E.	Riley.
Humphrey, Merritt	Davis.
Huston, Chas. M.	Davis.
Ingraham, Florence	Riley.
Jameson, Annie L.	Riley.
Jameson, Mary C.	Riley.
Kay, Jas. S.	Pottawatomie.
Kershaw, Jarvis	Riley.
Kimble, Carrie	Riley.
King, John	Marshall.
Knapp, Frank	Miami.
Knipe, Lucy A.	Riley.
Knipe, Wm. A.	Riley.
Knostman, Emma	Riley.
Kroenke, Carl	Riley.
Lane, William J.	Linn.
La Tourrette, Jas. F.	Colorado.
Leasure, Marion F.	Linn.
Lewin, John	Clay.
Lewis, Ira H.	Labette.
Lofinck, Reuben E.	Cherokee.
Lynch, James H.	Pottawatomie.
Mails, Chas.	Pottawatomie.
Mails, Jennie E.	Saline.
Maltby, Jas. C.	Riley.
Marlatt, Willie B.	Coffey.
Mathes, George W.	Davis.
McCallum, Albert M.	Davis.
McCallum, Chas. P.	Davis.
McCallum, Daniel E.	Davis.
McCallum, Hattie E.	Davis.
McKanlass, Wm. W.	Davis.
McConnell, Chas.	Riley.
McNamee, John	Davis.
McNamee, Mary F.	Davis.
McNamee, Michael	Davis.
Meacham, Mary A.	Riley.
Meeker, Julian L.	Franklin.
Merritt, Arthur	Jefferson.
Nelson, John H.	Ottawa.
Noyes, Amelia	Wabaunsee.
Oursler, Alphonso R.	Jackson.
Parkerson, Fannie R.	Riley.
Parkerson, Freeman	Riley.
Parish, Effie	Riley.
Parish, Ella	Riley.
Parish, Emma	Riley.
Pechner, Lizzie M.	Riley.
Peckham, W. H.	Riley.
Penry, Chas. E.	Reno.
Perry, Geo. H.	Riley.
Pike, Frank H.	Marion.
Pillsbury, Nellie	Riley.
Platt, Augustus H.	Riley.
Platt, Geo.	Riley.
Powers, Herbert W.	Riley.
Quinby, Frank B.	Clay.
Rambo, Jas. W.	Lyon.
Rathbun, Phebe	Riley.
Redenbaugh, Lydia	Osage.
Reed, Nona	Shawnee.
Rhoades, Anna H.	Pottawatomie.
Richmond, Irving	Sedgwick.
Rogers, Hope L.	Dickinson.
Rogers, J. W.	Dickinson.
Rogers, Julia F.	Osage.
Rogers, L. B.	Dickinson.
Romick, J. W.	Dickinson.
Roper, Nida	Riley.
Sawyer, Nellie	Franklin.
Shaw, James	Riley.
Shuemaker, S. C.	Nemaha.
Sikes, Melva E.	Pottawatomie.
Sikes, William H.	Pottawatomie.
Simpson, Emma	Riley.
Smith, Leslie H.	Shawnee.
Sternberg, Albert	Ellsworth.

Sternberg, Chas. H.	Ellsworth.
Stiles, Albert H.	Pottawatomie.
Stockwell, Sam'l H.	Nemaha.
Stone, Anna	Riley.
Thompson, Chas. H.	Wabaunsee.
Thompson, Ella M.	Riley.
Thorpe, Hattie M.	Riley.
Thorpe, Jennie B.	Riley.
Todd, Irving	Riley.
Travelute, Charles F.	Marshall.
Ulrich, Wm.	Riley.
Veatch, Belle V.	Riley.
Wake, Geo. A.	Riley.
Wertzberger, Anna	Wabaunsee.
Whitehorn, Arthur	Riley.
Whitman, Ida G.	Osage.
Whitman, Minerva	Osage.
Whitney, Genevieve	Riley.
Whitney, George	Douglas.
Whitney, Kittie	Riley.
Whitney, Willard	Riley.
Whitted, Chas. S.	Osage.
Williams, Cordelia	Shawnee.
Williams, Mary B.	Pottawatomie.
Williston, Carrie	Riley.
Williston, Frank H.	Riley.
Wilson, Amos E.	Dickinson.
Winne, Ella M.	Riley.
Winne, Jno.	Riley.
Wood, Arlie	Labette.
Wood, Frank W.	Jefferson.
Woodman, Agnes M.	Riley.
Wolam, Mama	Pottawatomie.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

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San Francisco, Cal.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, MAY 20, 1876.

No. 5.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription. Advertising rates made known on application. Address A. A. STEWART, Manhattan, Kas.

Educational Fund.

[Extracts from speech of Hon. Justin S. Morrill, of Vermont, in the Senate, April 26, 1876.*]

EDUCATION THE RIGHT OF AMERICANS.

But while general education must be recognized as the common outfit of all men and the indisputable right of Americans, special, and a more comprehensive education has become more than ever necessary to qualify each citizen for his own peculiar duties and position in life. Our latest civilization and the division of labor have opened new destinies and greater fortunes to mankind by wondrously multiplying the more productive and more remunerative occupations in modern society. New educational wants, keeping pace with a century and a half of marked original research, have been rapidly created, and nowhere perhaps more conspicuously than in the United States. The older colleges and universities have served well and, although the relative value of studies is not settled, with the modifications going on, will serve well to continue the eminence accorded to their system of literary education for those who are to obtain subsequent professional or special training; yet, as the sole reliance and last resort of the whole people, they are not only unequally distributed, but they have been hitherto either unable or unwilling to indulge much curiosity for any explorations outside of moss-covered traditions, and have given too little prominence to such scientific studies as might be most useful to the largest numbers, and strangely because of an obsolete theory that such would be accounted as of some use in practical life. A still more serious objection lies in the fact that the usual college course now costs triple the sum required fifty years ago. This objection is a growing one and should be overcome by larger public patronage or be checked by wholesome competition. The ladders by which boys climb from common schools to a college education should not be placed beyond the reach of the common people.

There is, therefore, a boundless field to be occupied by colleges which can and will give to students nowhere else provided for, a greater proportion of time to the learning, which is not only disciplinary, but really valuable for its own sake and helpful as some part of the foundation to a chosen sphere in the affairs of a busy world. The

tardy process of self-culture, by which men of mark have sometimes made their way, and which to large numbers, postponed until maturity points to other tasks, is the only process available, should be aided at the earliest moment by colleges that will enable a larger portion of those who cannot live without earning their living to bring forth and temper all the advantages of genius and talent with which by nature they have been endowed. Uncomputed numbers with unknown and uncomputed power, ought not to be suffered so largely to run to waste. We are often sad to think of the greater possibilities which even men not destitute of all fame have barely missed through some mischance or short-coming, but we rarely mourn and ponder over the wide possibilities of the unknown multitude fated to live in the shade without culture or sunshine and who fall at last, like crowded trees in the unvisited forest, with all their latent strength and beauty to slumber forever with the moldering past. Among our people there is much of this valuable timber that a Republic promising so grandly as to race, position and period cannot afford to leave in the background to utter waste. No; each one is —

A living thing,
Produced too slowly ever to decay;
Of form and aspect too magnificent
To be destroyed.

DISCONTENT OF LABORING-MEN.

Throughout the world, not excepting our own country, there is a deeply-seated feeling of discontent among laboring-men, not that they must labor, for they are not unwilling, but that so large a share of labor is wholly rude, unlettered, and so rarely loved or respected. Necessity binds them to an unending routine, often transmitted from one unskilled generation to the next, with no training and no guidance up the steep ascent to a higher plane of more congenial toil and to a better intellectual and social life. They feel that much of the existing intellectual superiority with which they have to compete is not entirely natural, but largely artificial, or only the usual and inevitable advantage bestowed by schools and colleges, which as they believe, ought to embrace a broader field to which they might furnish a much larger proportion of recruits and by which they could make their leisure hours too precious to be spent in idle dissipation. Something of the legitimate distinction conferred by humane approbation, now and then a prize among so many blanks, even workingmen, the most industrious and upright, have a laudable ambition to achieve, or to have their children achieve, as they might, if the gate-ways of toil bore not too generally that fearful motto, "All hope abandon, ye who enter here."

Pent-up discontent in worn and weary hearts is not less explosive than pent-up steam. Among the stern wrestlers with the world there are many striving for the mastery of the bottom knowledge and skill — now more than ever necessary — to do more and better work, and thereby to obtain not

only somewhat greater pecuniary rewards but such honors as they may fairly earn; not specially political honors, for they know as well as those who have tasted such that they are but ashes in the mouths of even the most voracious. Let them be qualified for any service, but above the need of political employment. A slight difference of earning power often determines human happiness or human misery. Some opportunity for improvement, for that training which the wisest of men are eager to obtain and find indispensable must be conceded and tendered to this vast human force, which, if not wisely directed, may be mischievously directed, or, if not directed by those to whom it belongs, it will be directed by demagogues to whom it ought not to belong and whose trade ought not to be encouraged. The ever-active toilers, pursuing their vocations with an absenteeism of the heart, are visibly restless under what seems to them the unescapable servitude of their whole class. Each one harbors Shakespeare's mistaken conviction:

Thence comes it that my name receives a brand,
And almost thence my nature is subdued
To what it works in, like the dyer's hand.

An opportunity only is wanted by good men to acquire such qualifications as will afford through diligent effort some hope of creditable eminence even while earning their daily bread, or some chance to make laborious employments here and there blaze with a few examples of their own shining lights, and possibly to perpetuate the memory of genius, enterprise and greatness, based upon honest industry and worthy manhood. No one here feels that poverty is a disgrace, but the disgrace arises when there is no effort by industry and education to escape from it. Our Government, the United States, provoking so much attention as it does in the history of the world by its unexampled growth, can afford neither cowardice nor indolence, and should awake to its grave responsibilities by being foremost to respond to educational demands so earnest, so reasonable, and so easily satisfied.

* * * * *

ECONOMY.

I well know that the present is a time when, in the interest of sound economy, all worthless schemes, every doubtful expenditure, all windy humbugs, as well as all sinecures, should be — will be — pitilessly slaughtered, and I mean to contribute, as I trust I have never failed to do, my full share of work to that kind of slaughter; but unwise, bat-eyed economy may often be actual prodigality or the saving of seed-corn at the expense of the whole crop; and it would be a portentous omen to the future destinies of our country if aid and encouragement to learning and science, to schools and colleges, should be doomed to crucifixion in such disreputable company. Upon the broadest principles of the purest and most far-reaching economy, the friends of the present bill base its highest claims to public favor, and it cannot be put down by a hue and cry raised to crush measures of

[Concluded on fourth page.]

*The Senate had under consideration, as in Committee of the Whole, the bill (S. No. 334) to establish an educational fund and apply a portion of the proceeds of the public lands to public education, and to provide for the more complete endowment and support of national colleges for the advancement of scientific and industrial education.

THE INDUSTRIALIST.

SATURDAY, MAY 20, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.
ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE next term of the Agricultural College begins Thursday, August 24th, 1876.

Fine Arts vs. Industrial.

In the last number of the New York Nation we find the following:

Instruction in art cannot be carried out in public schools, because it can be imparted only to pupils of advanced development and with special gifts. And instruction in drawing, which, perhaps, is what is now often meant by "art instruction," is equally removed from the category of common-school studies by the fact that under present conditions a sufficient number of competent instructors do not exist, either here or in Europe, and cannot quickly be called into being. We consider the recent movement in Massachusetts a mistake, even if it were judged only on this ground, since by ignoring the necessity of trained teachers it shows a wholly inadequate estimate of what is rightly involved in art instruction, and of the proper means of artistic training for industrial or other ends. Were we to suggest anything as a substitute for the "scheme now in 'vogue,'" it would be one which should modestly undertake, in the lower schools, the simple training of eye and hand to see and represent visual objects of common observation with a sufficient degree of correctness, without immediate consideration of any kind of artistic effort or elaborate finish of execution. By this discipline would be disclosed such artistic capacities in individuals as might be afterwards developed. We would offer especial warning against any so-called "well-digested" popular systems of recent growth. These systems all take their character from the general tone of modern thought, which is commercial and not artistic, and, when carefully examined, they prove to be lacking in the consistent development of the great principles which underlie all serious, intelligent work, whether of imaginative or decorative art.

Now, in all humbleness of spirit, we would ask leave to suggest that the above extract shows "a wholly inadequate estimate" of the real purpose and design of the "scheme now in vogue" for public instruction in industrial drawing. The Nation undoubtedly expresses the mind of a large class of individuals to whom, as artists or as connoisseurs in art, the present system of public art instruction, in the absence of a supply of "competent instructors," seems little better than sacrilege. To such a class this present system appears simply as a vulgar attempt to establish a "short cut" to excellence in art which, we all know, requires not only innate genius, but long years of patient work and study. But just here lies the misapprehension. This system of public instruction in drawing, whether in Kansas or in Massachusetts, does not propose the production either of artists or of art professors. Its simple purpose is to do

for the eye and the hand of the student what a mathematical and scientific course of study does for the mental faculties generally, to give to the one something of judgement and taste and to the other some degree of skill and freedom in execution. To the host of rising young mechanics in such a manufacturing State as Massachusetts, the importance of such a drill in industrial drawing can hardly be over-rated. And an industrial college, whose duty it is to equip for their work these farmers, mechanics and machinists, which neglects such a course of instruction, does so at its own peril. The lamented lack of "competent instructors" is, for practical purposes, admirably met by Mr. Walter Smith's series of drawing books, now coming so generally in favor. Their use for the purpose of instruction in free-hand drawing in this Institution has been followed by most satisfactory and encouraging results, as visitors to the Kansas building at the Centennial will be able to verify for themselves. We heartily trust that the time is not far off when elementary instruction in industrial drawing will form part of the course of every common school in this State.

What the Press Says.

The Manhattan INDUSTRIALIST is a yearling. Not very large but of very good quality.—[Farmer's Advocate.]

The Manhattan INDUSTRIALIST has entered its second year. It is the smallest and neatest weekly in Kansas.—[Blue Rapids Lantern.]

The Manhattan INDUSTRIALIST has entered its second year. It is the smallest and one of the best weeklies in the State.—[Wamego Blade.]

The INDUSTRIALIST, the neat little paper published at the Agricultural College, Manhattan, has commenced its second volume.—[Chase County Courant.]

THE "INDUSTRIALIST," published at the Agricultural College, Manhattan, is, though one of the smallest, yet among the very best of our exchanges, which we read always with pleasure, and from which we clip frequently. It is only 75 cents per annum, and is well worth ten times the cost.—[Neosho County Journal.]

SOME time ago we received a pamphlet copy of Prentiss' commencement address at Manhattan. Before we had had it fifteen minutes an acquaintance begged the loan of it, and up to date we have seen it never more. We presume the borrower is committing it to memory. But can't we have another from headquarters?—[Lawrence Journal.]

Yes! The INDUSTRIALIST represents the "head" and the Commonwealth the "quarters." Apply to either.

REV. JOHN A. ANDERSON, President of the Agricultural College, has been appointed one of the committee to award premiums at the Centennial Exposition at Philadelphia. There are two hundred and fifty persons named, one-half by foreign governments and one-half by the National Board

of Centennial Managers, whose duties will be during the summer to pass upon the various articles there exhibited.—[Junction Union.]

JOHN WILLIAMS, living four miles north of Labette, buried four or five jars of butter last summer, as an experiment. He removed one jar the other day and found the butter as nice and sweet as the day it was buried. His plan was to get a good sound jar, fill it with butter, tie a cloth over the top, put on a layer of salt about an inch thick, tie a strong cloth over the mouth of the jar, and bury the jar four feet deep, mouth down. Mr. Williams thinks that butter put up in this shape can be kept pure and nice any indefinite length of time.—[Lawrence Standard.]

THE following we clip from the Oskaloosa Independent. It is from the pen of F. H. Roberts, one of its editors, who lately visited Manhattan and the College:

Stopping off at Manhattan, on our return, we fell into the kind and hospitable hands of Major L. R. Elliott and his estimable family, which, of course, assured us a very pleasant visit. Manhattan is one of the pleasantest towns in the State, is finely located, well built up, and filled with an enterprising, intelligent people. We called upon the Nationalist, one of our most valued exchanges, and found it in a flourishing condition. Also visited the College and, under the guidance of Major Elliott and Prof. Anderson, the progressive, able President of the Institution, made a tour of the grounds and departments of instruction, including the neat rooms of our young friend, the INDUSTRIALIST. We looked in vain to see where the "fraud" which is so much talked of came in. We thought, from what we saw, that a very good, sensible and practical education was there being imparted. The school has been better attended the past winter than ever before, and we hope to see it still more prosperous.

News, EMPORIA. Is one of the oldest papers and one of the best advertising mediums in the West. Send for specimen copy. Stotler & Graham, Proprietors. 3-1m

Times, CHANUTE. A. L. Rivers, Editor and Proprietor. Published at Chanute, Neosho Co., Kansas, the crossing point of the L. L. & G. and M. K. & T. railroads. 4-1m

Mirror, MINNEAPOLIS. A monthly land journal devoted to the interests of the Solomon Valley. Subscription, 25 cents. Sample copies free. C. C. Olney, Editor. 4-1m

Kansan, NEWTON. Published every Thursday. Two dollars per annum. Twenty-eight columns. Republican in politics. H. C. Ashbaugh, Editor and Proprietor. 4-1m

Times, BLUE RAPIDS. Twenty-eight columns. Published at the principal manufacturing town of the State. Only home publication in Marshall county. Terms, \$2.00 a year. C. E. Tibbetts, Proprietor. 4-1m

Nationalist, MANHATTAN. A Republican Reform weekly. Contains reports of Bluemont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year. A. Griffin, Editor and Proprietor. 4-1m

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Union, JUNCTION CITY. Thirty-two columns. Fifteen years under one management. Brevity, Variety, Spice, Fearlessness, and an enthusiastic, vigorous and enterprising devotion to the best interests of the people (and especially our own) characterize it. Geo. W. Martin, editor and proprietor. 3-1m

THE INDUSTRIALIST.

SATURDAY, MAY 20, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:15 A. M., and 2:25 P. M.
Going West.....	8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, May 17th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	86°	63°	73.2	29.728	S-W 32	Clear
Friday.....	71	54	66.2	30.048	S-W 10	Fair
Saturday....	80	64	73.5	29.873	S-E 36	Fair
Sunday.....	82	63	73.0	29.712	S-W 44	Fair
Monday.....	81	60	72.5	29.595	S-W 24	Hy Rn
Tuesday....	78	55	70.0	29.878	S-W 4	Clear
Wednesday	82	62	75.2	29.827	S 26	Fair

Rainfall in inches, Monday, .75. Wednesday, .35. Total, 1.1.

HARRY F. McFARLAND,
Serg't Signal Service.

Old newspapers, at fifty cents per hundred, for sale at this office.

The INDUSTRIALIST is under many obligations to the courtesy of Mrs. C. F. Wilder, who furnishes the account of the commencement exercises.

Mrs. Werden goes West next week. She will attend the Teachers' Institute at Abilene, and then make "brother Frank," of Salina, a visit.

President Anderson and family started East Wednesday morning. The President goes directly to New York City to attend the opening of the General Assembly.

The carpenters are busy putting down the floor in the first story of the mechanical building. The plasterers will probably begin work upstairs in this building next week.

The American Chemical Society has just been organized in New York, with Dr. John W. Draper as President. Prof. Wm. K. Kedzie was elected a member of the society from Kansas.

We are in receipt of programmes of the triennial gathering of the Alumni of the State Agricultural College of Michigan. The exercises close with a general game of foot-ball in which all graduates take part.

The library of the College will be open during vacation, for the drawing of books, on Saturday of each week from 8:30 until 10 A. M. The library will be in charge of Miss Alice Stewart, who has kindly consented to take the place of the librarian during his absence.

The contractors have begun work on the laboratory building, which will be erected just across the road from the mechanical building and a little east of south. The site takes in the old road leading down to the stables. The horticultural building is to be placed about one hundred and fifty feet east of the mechanical building, and running east and west.

We understand that certain parties have circulated reports, in the vicinity of Irving, to the effect that Miss Ella Thompson, who attended College here last term, was suspended or expelled from the Institution and so compelled to return home. This is a very great mistake. Miss Thompson was honorably excused from the College. She was a good student, respected by all her associates who very much regretted her departure.

Commencement.

The Commencement exercises in town were held at the Presbyterian church, commencing on Sabbath evening with the Baccalaureate sermon by President Anderson. We regret our space will not admit of an extended report of a discourse so earnest and impressive. The subject, "Hope," was very appropriate to the young graduates, who go from this school into the larger school of the world with the bright expectation of obtaining all that is desirable therein. Not only the graduates but the crowded house listened with close attention to the thoughts which showed in what consisted the true hope in this life and in the life to come, and what were the hopes not well grounded. The music was truly excellent, and as usual under the direction of Prof. Platt, and consisted of a double quartette with Mrs. Werden at the organ, assisted by the orchestra under the direction of 'Squire Tyrrell.

On Tuesday evening the Under-graduates' Exhibition was held at the same place. After music and invocation, Mr. A. R. Oursler, of the Diagnosethean Society, the youngest of the College societies, gave an address, "Kansas and its Industries." The subject and ideas were good, but the frequent promptings lessened the pleasure which otherwise the audience must have felt. From the same society Miss Ella M. Winne read an essay, "Moral Courage," which evinced good and true thoughts, showing the bravery required to dare to do right. Mr. J. S. Griffing gave the next address, representing with Miss Esther E. Evans the Alpha Beta Society. Mr. Griffing did his society much credit. The subject, "Christianity as a Civilizer," was handled with skill and wisdom for one so young, and his oratorical ability made it a pleasure to listen. Miss Evans is a great favorite with the students and with the people of the place, who all regret that she goes to her home in Illinois with but little prospect of returning to the College at the next session. Her subject, "Use and Beauty," displayed culture and refinement which an ordinary observer would readily discern she possessed by her appearance.

"Daniel Webster" was discussed by Mr. M. F. Leisure, of the Webster Society, and we doubt not the hero of so many school-day orations would have felt gratified, if from his grave he could have heard this latest and best. Like Miss Evans, the next speaker, Mr. L. B. Rogers, of Dickinson county, is a general favorite with the people of Manhattan, who frequently meet the College students, and being an earnest worker he must also be respected by professors and students. His subject, "The Growth of Ideas," was interesting from the first word to the last. All of the orations and essays, of which we have only given the subjects, we shall endeavor to give to the readers of the INDUSTRIALIST as soon as our space will permit. The music under the direction of Prof. Platt was better than the average on such occasions. The chorus by the students, "I will praise thy name, O God," was very enjoyable. The quartette, "Come where the wild flowers bloom," was also well rendered. The last duet, by Prof. Platt and Mrs. Werden, "How sweet and beautiful is night!" was probably as fine as anything given in Manhattan for a long time.

On Wednesday evening the same large church was crowded by an intelligent audience, composed of the parents and friends of the students from abroad, and the people of this vicinity. The Regents, who are among the best men in the State, graced by their presence the public exercises of each evening. The platform was adorned both evenings with over fifty house plants in full bloom, belonging to Mrs. Tom. J. Jenkins, and kindly loaned for the occasion. The Manhattan Brass Band in the east gallery furnished delightful music on this evening. The graduating class, the three young ladies in white, each attended by a brother or friend, occupied the front seats. The

salutatory, by Mr. George A. Gale, was a sensible, practical and interesting oration. Subject: "Brains in Agriculture." Miss Carrie M. Kimble's address, "Still Better Things to Come," was a good production and well delivered. "Our Lives," by Miss Nellie Sawyer, was a dissertation on the problem of life and woman's work and opportunities. Miss Sawyer goes to her home in Franklin county with the best wishes of the many friends she has made in this place, and the hope that through life she may continue to be the same earnest learner and worker in all things pure and noble. The valedictory, an honor well deserved, was by the conscientious, faithful student, Miss Ella M. Gale, and her quiet self-possession and dignified manner added to the charm of the refined thoughts concerning "Beauty and Science in Real Life."

The roses and pansies hurried their time of blossoming for this occasion and at the close of each address a beautiful bouquet of flowers was thrown at the feet of the speaker. A diploma, with the honor of A. B., was conferred on each of those mentioned, also on Miss Minnie Whitman, an earnest student and hard worker who graduates one year in advance of her class.

After the close of the excellent address, by Major J. K. Hudson, which we shall publish in full, the many friends of the graduates, the Regents and parents, crowded around to offer congratulations and utter good wishes to those who have for so long a time been connected with the College and who now go from their Alma Mater with hearts filled with mingled feelings of hope, joy and regret.

MARRIED.

JENKINS—HOYT—At the Presbyterian church, Monday evening, May 15th, 1876, by Rev. J. A. Anderson, President State Agricultural College, Mr. THOS. J. JENKINS and MISS MAGGIE J. HOYT, both of Manhattan.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

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Journal, OSAGE MISSION. C. H. Howard, editor. Published every Wednesday at Osage Mission, Neosho county, at \$2 per annum. 3-1m

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[Concluded from first page.]
a far different character, with which it has neither kinship nor affinity.

It may not improperly be claimed that this measure really plants the seeds of a future harvest of revenue and will in the end not only augment the productions of industry and increase the wealth of the country, but it will thereby add considerably to the receipts of the Treasury, which always rise or fall with the general prosperity; and beyond all this, so far as a broader education rapidly tends to multiply the number of letter-writers, or promotes the interchange of ideas or courtesies, as well as of commodities, it may be expected to contribute something toward lifting up even the Post-Office Department nearer to a self-supporting condition. The first year of common schools in Great Britain increased their postal revenue over \$3,000,000. It is then by no means fanciful dreaming to claim this school and college bill incidentally as a revenue measure, and that its passage will ultimately actually increase the revenues of the country.

In every great enterprise it is true we must consider what we are to lose as well as what we are to gain. By the proposed measure of further aid to national colleges and a very substantial contribution to common schools, we shall gradually part with our title to the ownership of a limited quantity of land — small in comparison with the bulk of our possessions — from which the policy of acquiring ordinary revenue long ago practically ceased. Broad acres we shall still offer free to all who ask for homes. But for revenue purposes the public lands can now furnish no regular basis, and their value ought to be held as far too precious to be bartered for merely moneyed equivalents that must be swallowed up at once in ordinary expenditures.

On the other side, the gain here proposed to be slowly derived from any sales of these lands will be a perpetual educational fund, retained in the custody of the nation and kept, like the heat of the summer sun, forever undiminished, while barely the interest thereon will be annually expended by each State for the culture and enlightenment of all their coming generations.

By this fund we first promote primary education by aiding State systems of common schools, and then we are to have institutions of learning—at least one college—in every State, planted on foundations not very magnificent, it is true, but as broad and firm as the foundations of the Government itself, by which a more complete education in every part of the Union will be brought within the reach of large numbers — too poor to seek it in any modern Athens or Rome—and to whom it will give that “crown and scepter” which thorough education always gives, but gives alas! to too few. Surely, what we are to gain, as indicated even by this tame and stinted recital, is far more precious, far more considerable, than what we are to lose. In fact, it is an error to assume that we are to lose anything when we rescue and preserve for ages that which might otherwise in some earlier or later flood of congressional grants disappear altogether, leaving no enduring trace behind except the record of sundry petty schemes with the “hungry edge” of local appetite for such schemes sharpened rather than satisfied.

But even the relatively insignificant portion of the public domain which can now under any circumstances be appropriated for the purposes here indicated will in

many ways contribute to the strength and glory of our country. It will be the disposal of the surplus part of the national farm—of a few back lots—for the permanent improvement of the remainder, and for increasing the skill and all forces of those charged with its future ownership and productive development.

* * * * *

WHAT THE NATIONAL COLLEGES HAVE DONE.

But the pertinent inquiry may be made, what have the colleges, started under the act of 1862, done that gives room to hope for their success or that entitles them to further favor? It may be too early to seek a full answer to this question, but there is no reason why it should be evaded. To call them a failure “would be,” as the President of Dartmouth College lately said to me, “as absurd as to call the day a failure when we had seen but half an hour of it.” It is unwise to despise small beginnings, for they often forerun great things. It will at once be noted that nearly one-third of these colleges have not yet had time to get into working order, but by the latest reports which I have examined twenty-eight of them, while yet in the cradle of their existence, had 3,842 students with 356 instructors, being an average of 137 students and 12.7 instructors respectively. Compare this with the 323 older institutions, the growth of a century, which in 1873 had no more than 25,010 students and 3,108 instructors, or only an average of 77 students and 9.6 instructors respectively. Surely these facts, so early developed as budding evidences of honor and usefulness will put to flight any doubts as to the amount of work being done or as to the share of public consideration they are receiving, and the national colleges may now fearlessly challenge the support of the most cautious legislators. Upheld by the industrial classes as well as by nearly all of the scientific men of the country, as they are and will be, their success cannot be doubtful; and let me ask for what other 15,000,000 acres of public land has the Government so much to show?

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

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THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, MAY 27, 1876.

No. 6.

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Christianity as a Civilizer.

[An oration delivered by John S. Griffing, of the Alpha Beta Literary Society, at the Under-Graduates' Exhibition of the Kansas State Agricultural College, Tuesday evening, May 16th, 1876.]

Is the world advancing in civilization? When we compare the present condition of the world with that of two thousand years ago, it cannot but be admitted that in point of civilization the former is far ahead of the latter. Compare, if you please, ancient barbarous and savage tribes with modern civilized nations. The former, scattered in comfortless hovels, subsisted by hunting, fishing, or on scanty crops raised on small patches of ground worked by the rudest of tools. The latter are blest with smooth, cultivated fields, green meadows and golden harvests. Commerce, with its hum of business extending through populous cities and along hundreds of far-stretching lines of railway, scatters comforts and luxuries to millions of homes; while ships for foreign commerce are seen in every channel and in every sea. The contrast shows the difference between uncivilized and civilized nations.

What has been the cause of this great change, and how is it that the civilization of the present century is so much higher than it was two thousand years ago? Climate and other physical conditions, philosophy, literature, the sciences and arts, have all put in for their share of the glory; but it is small compared with that which christianity has received. In all times and in all countries it has been found that christianity has civilized the people among whom it has dwelt. Christianity has a moral influence, a moral power; it changes the interior condition of man; it changes his opinions and sentiments, regenerates his moral and intellectual faculties, and maintains the idea of precept of a law superior to all human authority. It proclaims that great truth which forms the only foundation of our hope for humanity, viz: that there exists a law superior to all human law which, by whatever name it be called, whether reason, the law of God, or anything else, it is in all times and places the same law unchangeable.

We would not try to prove that christianity alone has been the sole promoter of civilization. There are other causes to be taken into consideration which are important, some in a direct others in an indirect way, to civilization. The direct influence of climate upon man, as affecting his moral sensibilities, is to say the least vague and difficult to conceive of, and is not so extensive as is generally supposed; but the indirect effect of climate — that in a hot climate man lives in the open air, while in a cold one he lives under shelter; that he lives in

one climate upon one kind of food, and in a different climate upon another—is of extreme importance, for a simple change in physical life may produce a powerful effect on the course of civilization. Every great revolution, changes which take place in the life and manners of a people in consequence of some new event, lead to modifications of this kind in the social system. For instance, the establishing of the feudal system in Europe wrought a great change of this kind and had a powerful effect on the course of civilization in that country. Indeed, physical conditions are rising at all times to change in a measure the course of civilization.

But what we notice about christianity is its steady, ever-increasing power. Countless efforts have been made by skeptics, atheists and infidels to arrest its course, only to find themselves foiled in the attempt, their labors all in vain, and their blasphemies like the storied boomerang recoiled upon their own heads, and christianity stands to-day firm and unyielding to the many who scoff at and deride its teachings. We can see a striking example of the effect of christianity as a civilizing agent in countries where the people have lived for ages in ignorance and superstition. Look at China, Japan and India, and dark and heathenish Africa even is coming out of the shroud of darkness in which she had long been enveloped and is beginning to see the only and true light. Until within the last century very little was known of these nations except that they were inhabited by races of people entirely different in manners and customs from the Caucasians, and who worshipped not the only true God but idols fashioned by their own hands. Now how changed. Missionaries have been sent among them and christianity with an almost magical power is rejuvenating these nations grown old in superstition and despair and planting among them the germs of a civilization nobler than has yet been recognized. A large portion of the commerce at the present time is with these nations which were a short time ago entirely shut out from us.

We have not time to trace the progress of christianity from its infancy to the present day and note the many storms it has passed through and the many stumbling-blocks that have been placed in its way, and how through and over these it has passed, steadily gaining ground, until to-day it wields a mighty power.

Christianity did not do its work in a single moment, but has been slowly and ceaselessly working for ages and it will work through the ages to come, for high as the civilization of the present day is compared with the past it is still far from being perfect. Yet we can without any great degree of pride say, as Sthenelas is made to do in Homer, that "We return thanks to God that we are infinitely better than our fathers." Where we find a nation whose people take the Bible for their standard of right and wrong we shall find that they are governed by laws that are just and equitable; they are people who are free and enlightened, and each man

worships God according to the dictates of his own conscience with no one to molest or make him afraid. We shall find commerce in a thriving condition, cities where the busy hum of business is heard proclaiming wealth and prosperity, and churches and school-houses in every village and city throughout the land heralding the grand advance of civilization.

Decrease of Population in our Farming Counties.—Farmers' Prospects.

The State Census in New York shows that there has been a decrease of population in ten of its agricultural counties in the last five years, amounting to 6,177. All the counties having a large city, except Jefferson, show a decided increase, which reveals the fact that the tendency of our population is more and more toward cities. All the increase of the State in the last five years, which amounts to 322,000, has been in cities and villages. This tendency has been marked in New England for the last fifty years, and is destined to go on in the future. Nothing can be more certain than that in the older States the consumers of agricultural products are rapidly increasing while the farming population is decreasing, or barely holds its own. It follows from this that farm products must increase in value. The demand for them grows faster than the supply. Within the next fifty years the price of many of these products has doubled, and some of them quadrupled. Veal and mutton were thought to be well sold at 4 and 5 cents a pound, cheese at 6 cents, eggs at 10, butter at 12½, poultry at 10, and beef and pork at 5 and 6 cents. Animal products are, without doubt, destined to advance in price still further. If prices go up as consumers multiply, farming must pay better in the future than it has in the past. The young men who, during our centennial year, will make up their minds as to their business in life, should take these facts into consideration. There is to be a harder struggle for bread and the comforts of life, in the large cities, where consumers are so rapidly multiplying. Labor will not be so well rewarded there. All farm products will be in greater demand, and will bear higher prices, while the cost of production will not be materially increased. The comforts of life have greatly improved in our farming districts, and in most of them in the older States the style of living is much above that of laboring people in cities. To those who stick by the farm and cultivate the paternal acres, the future promises an abundant reward.—[American Agriculturist.

Stick to Your Farms.

The life of a farmer is not an easy one; but when we look around and see the wrecks of fortune made on every hand by men engaged in other pursuits, the farmer has cause to be thankful if he can support his family and give his children a good common education. It has been stated that during the last half century only four mer-

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, MAY 27, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

What Has Been Done.

The Kansas State Agricultural College has in many ways and on many occasions offered the youth of the State "a thorough and direct education for the farm, orchard, shop and store. Tuition absolutely free." The Commencement exercises of last week closed the second year in which this policy has been in full force, and the people of the State are interested to know whether a progressive movement has been made along this line, and whether the attendance shows a demand on the part of the people for the work done.

We can only answer queries like the above by referring to the work actually done during the past year. In those sciences embraced by the general terms Mathematics, Natural Sciences and English, the work has been fully up to the old standard, the class rooms have been crowded to their utmost capacity, and the interest of the students has been all that the teacher could desire; but even in these studies the general aim of the College has not been lost sight of, and the "practical examples" instead of being ignored or passed lightly by, as is too often the case, have been dwelt upon and enforced equally with the abstract principles underlying them. In those studies peculiar to the College our success has been most gratifying. The classes in Practical Agriculture, Horticulture, Agricultural Chemistry, Carpentry, Printing and Telegraphy, have been larger than ever before in the history of the College, and the progress that has been made in the work warrants us in giving them a place outside the region of "experiment" among the proved facts of our College history.

At the beginning of the last year a large class of young ladies was formed from the advanced class in the Woman's Course, and a thorough course of instruction extending through the entire year was given in such practical matters as Dairying, Household Chemistry, Gardening and Hygiene, by the teachers in departments including these topics. With the beginning of next year the work will be continued under greatly improved conditions, a kitchen laboratory and facilities for dairying having been added. The lectures of Judge Brewer, on the subject of Practical Law, were the most palpable hit of the year. They have been to the whole College the "missing link" between the student and the business man.

For the coming College year we can only say that all the indications point to an even more vigorous presentation of the work so auspiciously begun. • The farm and the

nursery will be in better condition than ever before to fill their legitimate places—a means of illustration to the classes in Agriculture and Horticulture. The Horticultural Department, with the addition of the new building with its grafting rooms, greenhouses, conservatories, etc., and especially since it has been combined with the Department of Botany, will be stronger and more distinctively horticultural. At the beginning of the next term the eminent entomologist, Prof. C. V. Riley, will take charge of the classes in Entomology. Many other improvements too numerous to mention in detail will appear at the opening of the new year—a magnificent chemical laboratory with all modern appliances, the shops floored and furnished, the farm subdivided into fields and valuable additions made to its live stock.

As to that other question whether there is a demand for this work, we can only point to the students who have applied for instruction. Our roll shows one hundred and ninety-four students admitted during the past year, a number fully twenty per cent greater than have ever been admitted during any previous year in the history of the College.—[Prof. E. M. Shelton.]

Our Grasses.

There seems to be no doubt that alfalfa is a genuine acquisition to Kansas. We have just looked over our two-acre field and such a mass of vegetation we have rarely seen before. On this the 24th of May, when the prairies show little more than the traditional "bite for a goose," we have plucked single stalks of alfalfa that measured thirty inches in length. If our two acres were mowed to-day they would yield one and one-half tons of cured hay. But we question much if alfalfa will make a valuable hay even when cut early in the season. The foliage of this alfalfa is small in comparison with the stems, and these are nearly solid, hard and woody. In all these respects the old red clover has the advantage over its rival alfalfa. Nevertheless alfalfa will flourish when red clover is perishing from drought, and it yields double and treble the amount of hay. Alfalfa promises to be of special value to Kansas farmers in furnishing feed for swine. Pigs will eat it greedily, and two acres of alfalfa would safely furnish abundant pasture during the spring season for a dozen swine.

We have never yet lost our faith in bluegrass. Ours made a capital growth during the dry seasons of 1874-5, and although gnawed to the ground by grasshoppers last season "it still waves," indeed it is knee high and in full bloom. What is quite as well it is spreading rapidly. Along nearly every fence on the farm, and in places undisturbed by the plow, generally dense masses may be seen and these have often spread out into the prairie completely routing the wild grasses.—[Prof. E. M. Shelton.]

A Pond on Every Farm.

Kansas has no lakes, no swamps, no sloughs. We thus gain much in arable lands and in escaping noxious exhalations. We lose in natural fountains for stock water and we lose in rain-fall. A pond on every farm would fill the air with moisture and feed the clouds with rain. The water evaporated from the ponds would be distributed over the farms in showers and again feed the springs and ponds. *

Kansas can easily be made a land of lakes and ponds. It is within the power of almost every farmer to have one or more ponds on his quarter-section. All that is necessary is to build a wall across a ravine or gully. There are depressions of land on every farm; close one up and permit it to retain the water that now wastes to the rivers and the sea. Sometimes these gullies are shaped like a trough or like the letter V, and can be easily shut up. The railroad companies have made such inclosures in some parts of this State near the wells that supply their tanks. Such wells never fail.

—[Commonwealth.]

With the article of which the above is an extract, our friend of the Commonwealth introduced a seasonable topic in its best dress. It is only concerning the sentence "we lose in natural fountains for stock water" that we desire to raise a "point" to-day. If any one will be to the pains of examining carefully during the summer season water from one of these ponds, he will find it malodorous of decomposing vegetation, literally "alive" with animalculæ and totally unfit for the consumption of man or beast.

A late writer in the Country Gentleman gives a list of the diseases of neat cattle, including the black leg the terror of Kansas stock-raisers, induced by the consumption of stagnant water. Hon. Ira Lewes, in a recent address before a New York Dairyman's Association, says: "Water affects the quality of milk as much as food does, and the better the water and the more of it the better the milk and more of it." Floating curds (incipient putrefaction), the dread of the cheese-maker, are nearly always prevented, says Willard, by using milk from cows "that have no access at all to stagnant, filthy water."

In the report of the New York State Dairyman's Association and Board of Trade 1871-2, it is stated:

"Of injurious substances which may exist in the material furnished the animal, the latest discovered is a fungus found in stagnant water, and which preserves its living identity as it passes through the laboratory of the cow and reappears in the blood and in the milk. Its presence occasions disease in the animal, and as it is carried from the animal in the milk it may in turn be transferred from the milk to all who use it."

Whatever may be the value of the ponds, if you have not springs and running brooks, dig wells for "stock water;" and if you can not afford to erect a wind-mill, pump water for your stock. You can hardly employ labor to better advantage.—[Prof. E. M. Shelton.]

THE INDUSTRIALIST.

SATURDAY, MAY 27, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:15 A. M., and 2:25 P. M.
Going West.....	8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, May 24th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean		Direction.	
Thursday ...	79°	63°	72.7	29.790	S-W 24	Fair
Friday.....	82	67	75.0	29.745	S-W 44	Fair
Saturday....	82	63	75.2	29.732	S-W 28	Fair
Sunday.....	84	67	78.0	29.760	S-W 16	Clear
Monday.....	75	57	64.5	29.998	S-W 28	Lt R'N
Tuesday....	65	50	51.7	30.200	N-E 20	Lt R'N
Wednesday	70	51	63.5	30.127	N-E 16	Cloudy

Rain-fall, .69.

HARRY F. MCFARLAND,
Serg't Signal Service.

W. C. Stewart went to Irving last "Weeks." We wonder why.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

The corn on the farm is up and growing finely. How else, with such weather.

Our next issue will contain Major Hudson's address, delivered Commencement, entitled, "The Student's Problem—Shall I be a Success or a Failure?"

Prof. M. L. Ward and wife and Mrs. M. E. Cripps started East last Monday. They will visit many of the eastern cities, including Philadelphia and the great Centennial.

The land lying west and north of the mechanical building has been sown to millet. Mangewurzels will be grown upon the land surrounding the College building and the piggery.

The editorial in last week's paper entitled, "Fine Art vs. Industrial," should have been credited to Prof. Wm. K. Kedzie. Of course, carelessness upon the part of the printer is our only excuse.

Ground was broken for the laboratory building on Thursday last, and at this writing a large force of men and teams are hauling stone, digging trenches, and generally pushing the work.

The sewing and music rooms, besides receiving the same finishing touches which the other rooms do, are to be carpeted with a fine quality of carpet, while white curtains will adorn the windows.

During the thunder-storm of Monday last, the weather vane belonging to the Signal Service Station was struck by lightning and the rod supporting it badly twisted. Although the vane was upon the College building, no damage was done beyond that above-mentioned.

The Farm Department has recently shipped to Mr. McClaury, Wild Cat, Riley county, and to B. Anderson, McPherson county, each a pair of Berkshire pigs; to J. Mails, Manhattan, one Berkshire boar pig; and to W. P. Popeno, Topeka, and C. Hennings, Victoria, Kas., each a Berkshire gilt.

Several of the students spend the vacation in this vicinity. We notice Messrs. Leasure, Kay and Grifing at work on the farm; Richmond and Ulrich in the carpenter shop; King in the nursery; while Dan McCallum, Rambo, Foster and Ellsworth are working for different parties in this neighborhood.

Reports which we receive from the students confirm the belief that they reached their homes in safety, and are enjoying the vacation to the fullest extent. Glad of it, but soon vacation will be an old story and many of you will long for access to the carpenter's bench, telegraph instrument, printer's case, or piano.

As we go to press the work on the laboratory building is being pushed very rapidly along. A large force is employed, and as a consequence things are quite lively around these parts. The stone work on this building will be finished by the 15th of July, when work will commence on the horticultural building.

It is disagreeable, to say the least, to be huddled up—type, editor, compositor and all—in the center of a room and compelled to produce the INDUSTRIALIST on time, while the carpenter with saw and hammer seems to be doing his utmost to prevent the aforesaid occurrence. We are consoled only by the fact that soon we will receive no more calls from carpenters and plasterers.

Mr. George A. Gale, who graduated from this Institution last week, is beginning work in the world's school in earnest. He has taken charge of a large farm near Milford, Davis county. Witness the result of a practical education. George is a steady, industrious young man, possessing no small amount of good judgment and skill, which he can readily apply in his chosen vocation. We trust that in his adventure he may be successful.

Last Monday morning Miss Esther Evans departed for her home in Plainfield, Illinois. Miss Evans came here last summer for the benefit of her health and to attend the College. She returns with the feeling that of all the years spent away from home at College this has been the happiest, and that she has greatly improved in health while the advancement made in her studies is exceedingly satisfactory. May her good health as well as our kind wishes accompany her to her former home and friends.

The weekly edition of the Topeka Commonwealth will be furnished as a campaign paper, commencing June 15th and ending Nov. 15th, on the following terms: Single copy, 50 cents; clubs of not less than ten to one address at one post-office, \$4.50; clubs of twenty to one address and one post-office, and an extra copy to the person getting up the club, \$8.00; additional numbers at the same rate.

Daily edition: From June 10th to Nov. 10th, single copies, \$3.00; clubs of four to one address and one post-office, \$10.00; clubs of ten to one address and one post-office, \$22.50, and an extra copy to the person getting up the club.

Postmasters and others are requested to act as agents. Cash must accompany every order, or no attention will be paid to it. Money sent by draft, money order or registered letter at my risk. Address, F. P. Baker, Topeka, Kansas.

Prof. M. L. Ward, of the Kansas State Agricultural College, accompanied by his wife, passed through the city yesterday evening en route to the Centennial.—[Kansas City Journal Commerce, 22nd.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Blade, TOPEKA. Daily, \$3.00 a year; weekly 50 cents. The only positively independent paper in Kansas. 4-1m

Patriot, ATCHISON. Established in 1867. The only Democratic daily in Kansas. Park & Vandegrift, Proprietors. 4-1m

Courier, WINFIELD. Republican; weekly. Official county paper. No more subscribers needed. E. C. Manning, Publisher. 4-1m

Sentinel, LAWRENCE. The only temperance paper in the West. Published weekly; terms, \$2 per year. D. C. Beach, Publisher. 3-1m

Herald, Hiawatha. Official paper of city and county. Terms, \$2.00 per year. Burger & Roberts, Proprietors. 6-1m

Lantern, Blue Rapids. A 16-column paper, set in nonpareil. No patent outside. \$1.00 a year. Frank Hall, Publisher. 6-1m

Plaindealer, Garnett. Devoted to the interests of Anderson county and Kansas. Republican. S. H. Dodge, Publisher. 6-1m

Independent, McPherson. Independent Republican in politics. \$2.00 per year. Geo. McClintock, Editor and Proprietor. 6-1m

Courant, Howard City. All questions regarding Elk county or southern Kansas cheerfully answered. Address, Courant. 6-1m

Sentinel, Minneapolis. A weekly, independent, Republican paper, printed and published by Hoyt & Midgley. Circulation in county, 500.

Appeal, LEAVENWORTH. Independent Democratic. Published daily, except Sunday. \$5.00 a year. W. W. Embry, Editor and Proprietor. 4-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. 6-1m

Free Press, OSAGE CITY. Largest paper in Kansas. Published in the great central coal region of Kansas. W. H. Morgan, Editor and Proprietor. 4-1m

Republican, Baxter Springs. Politically, Republican; morally, Christian; financially, gold basis. Weekly. A. J. R. Smith, Editor and Proprietor. 6-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Gifford & Winter. 6-1m

News, EMPORIA. Is one of the oldest papers and one of the best advertising mediums in the West. Send for specimen copy. Stotler & Graham, Proprietors. 3-1m

Times, CHANUTE. A. L. Rivers, Editor and Proprietor. Published at Chanute, Neosho Co., Kansas, the crossing point of the L. L. & G. and M. K. & T. railroads. 4-1m

Blade, WAMEGO. Don't read this until you send for a sample copy of the Blade, the leading local paper of Pottawatomie county. R. Cunningham & Co., Publishers. 6-1m

Mirror, MINNEAPOLIS. A monthly journal devoted to the interests of the Solomon Valley. Subscription, 25 cents. Sample copies free. C. C. Olney, Editor. 4-1m

Kansan, NEWTON. Published every Thursday. Two dollars per annum. Twenty-eight columns. Republican in politics. H. C. Ashbaugh, Editor and Proprietor. 4-1m

Independent, OKLAHOMA. Established in 1860. Is in a flourishing condition, with a steadily increasing circulation. Edited and published by J. W. and F. H. Roberts. 6-1m

Enterprise, MANHATTAN. A lively, wide-awake, local newspaper. \$1.00 a year. Subscribe if you want to keep posted on everything transpiring. Patee & Runyan, Publishers. 6-1m

Times, BLUE RAPIDS. Twenty-eight columns. Published at the principal manufacturing town of the State. Only home publication in Marion county. Terms, \$2.00 a year. C. E. Tibbets, Proprietor. 4-1m

Nationalist, MANHATTAN. A Republican Reform weekly. Contains reports of Blue-mont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year. A. Griffin, Editor and Proprietor. 4-1m

Courant, COTTONWOOD FALLS. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 1-1m

Union, JUNCTION CITY. Thirty-two columns. Fifteen years under one management. Brevity, Variety, Spice, Fearlessness, and an enthusiastic, vigorous and enterprising devotion to the best interests of the people (and especially our own) characterize it. Geo. W. Martin, editor and proprietor. 3-1m

[Concluded from first page.]

chants in the city of New York, out of every hundred, have succeeded in making their business profitable. The unsuccessful ones have managed, in many cases, to continue in business for years after they had become bankrupt according to their books; but of course finally had to succumb to their fate. These men while living in good style, and many luxuriously, have carried continually a load of care that no farmer ever experienced; and when the time came that their business must be wound up, their condition generally has been one of poverty and utterly broken down in spirits. A few recover and resume business again; but the majority are pushed aside to make room for others, eventually to follow in their footsteps and end their lives in misery and despair.

Farmers, be contented. You may not be able to lay up money; but if you can pay for your farms and live comfortably, envy not the condition of those engaged in other pursuits. To those farmers who are out of debt and own good farms, need I say that the apparently wealthy bankers of Wall street might envy you your lot. Nearly every week some one of these firms, owing millions of dollars, explodes, and its members sink into poverty and obscurity; but the farmer who is out of debt owns a bank that can never fail, inasmuch as seedtime and harvest are promised unto the end of time.

A word to farmers' sons: If your fathers own good farms which are not mortgaged don't all abandon your home. One of you, at least, should remain to carry on the farm when your father's lease of life has expired. You might possibly do better in some other business, but you had better not risk a change.—[New York Observer.]

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Physician and Surgeon.—L. J. Lyman, M. D. Prompt attention given to calls, day or night. Office and residence No. 27, Poyntz Avenue, Manhattan. 37-3m

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan. 37-3m

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Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects inimical to the Kansas Farmer.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

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CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

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THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JUNE 3, 1876.

No. 7.

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THE STUDENT'S PROBLEM.

"Shall I be a Success or a Failure?"
[An Address delivered by Major J. K. Hudson before the Kansas State Agricultural College, Wednesday evening, May 17th, 1876.]

Mr. President, Gentlemen of the Board of Regents, Students of the Agricultural College, and Fellow-Citizens:

The subject upon which some considerations will be presented you this evening, you will find addressed more particularly to the young men and young women. It is "The Student's Problem—Shall I be a Success or a Failure?"

It may be said that vigorous youth with its splendid dreams does not profoundly study the sterner realities that lie before it. Yet I apprehend there is not a young man or woman to whom the pertinent and sober question has not come, unbidden perhaps, but still has come in many forms, "Am I to be a Success or a Failure?" If you have been on the river, in the pilot-house, you have seen the man at the wheel sometimes puzzled to decide which way to head the boat. A new sand-bar may have appeared since his last trip, or a snag shown a point where he had not before seen one. It requires skill and care to pilot the boat, even though the trip is made every week for years. As we are making but one trip, individually, it must require a peculiar wisdom, indeed, to guide us into port without having been shoaled or snagged or wrecked on the way, in short, to make it a successful and a paying trip. The point I endeavor to make to-night is simply that we can not borrow our pilot, that the responsibility of getting into port rests with ourselves. I shall merely blow the fog-whistle and if it prevents an accident the labor shall not have been in vain.

It is probably not essential to the working out of the plan and philosophy of this world that all should be Websters, Washingtons, Madam Rolands or Margaret Fullers. An intelligent observer remarked, with humor and sense, that the demand for United States Senators was very limited, but that there was a large and increasing call for first-class county officers. That every gun pointed toward the top of the tree should contain an adequate charge of powder to carry the ball is a common-place truth, yet there remains this idea that the aim of every individual indicates the possibility of his shot. Life is something more than heroics, yet the history of the humblest and grandest heroes alike shows that they who do their parts, who fulfill the measure of their destiny, must have the essential elements of labor, patience, courage and self-

respect. The student, looking forward to the solution of his own problem, may, in the exuberance of health, of youthful ambition, with his mind filled with bright creations of future triumphs, overlook the real labor that lies between the present and the success of his or her cherished hopes.

It is interesting not only to the young student but to the older ones to study the power by which men grow to be successful in any of the vocations of life. We want to know their methods, their individual habits; we study the achievements that have given them pre-eminence, but if we get down to the secret forces we shall in the vast majority of cases learn that persistent hard work lies at the foundation of what we supposed to be great natural endowments. One of the striking features of successful lives is that they have grown gradually into success while making a field of operations where others saw nothing to accomplish. They have had the larger vision of faith, which comes to the man who feels that he has something in this world to do and resolutely goes to work to do it. You will meet in society, in business, everywhere, those who feel that the world has not appreciated them, that their opportunity has never come, that fate deals harshly with them, and that luck is against them. This is not true; the world appreciates our merits better than we think; it knows us on the average as well as we know ourselves. Every word we utter, every step we take, every action of our lives, is an open page that proclaims our principles, our thoughts, our depth or our shallowness. Every one around us is a reader, more or less apt, of our book of human nature that can neither be concealed nor closed. Of the few things we may conceal in this life, character or the lack of it is not one of them.

Our failures come to us mostly through our stupidity or a lack of thoroughness and labor adequate to the end desired. Napoleon said: "All great generals have performed vast achievements by adjusting efforts to obstacles." Think of the successful men you know, are not their victories the result of long years of patient, exacting toil? And what is further true is that nearly all successful men have built upon the safe basis of integrity and truth towards their fellow-men. How the Franklins, the Greeleys and the Lincolns, men of worth and strength and power, brighten every page of our history. American biography shows to every student the value of persistent, honest, earnest labor by the men who have come up from poverty and obscurity to write for us our poetry and history, teach us science and art, and benefit the whole race by their great inventions. The lives of generals, statesmen and philosophers, not only of this country but of all nations, teach the same great truth, that persistent labor brings results that the world calls genius.

Our fathers subdued the country east of the Mississippi River with the six-horse wagon, the axe, the scythe, the grain-cradle and the old United States spelling-book. We are pushing the line of civilization

westward with the railroad, the telegraph, the gang-plow, the reaper and the daily press. It is the age of action, of quick intelligence. The school-houses that dot our prairies from the line of hostile Indians eastward are monuments to the faith pioneer fathers and mothers have in education. The rising generation has to-day opportunities none possessed before it. What are to be its achievements? Some writer said that each generation of men was laid down as a corduroy road for succeeding ones to march over to greater victories and higher civilizations.

Whatever the vocation chosen, whatever the standard of intelligence or influence aimed at, there is nothing more essential, in our estimation, to true manhood than independence of character. The student may not be brilliant, he may be only a plodding, average man, as most of us are, but he may make for himself an influential place if he but think for himself. Let his character be stamped with an individuality of its own, one brave enough to place upon his crest the device of the Northman, a pickaxe with the motto, "Either I will find a way or make one." The impertinence of a narrow, selfish mind must not be mistaken for the convictions of a man who measures the fact that he is responsible to himself and to his God. Some characters are like the boulders, worn smooth and hard without particular shape or use; they are the politic men and women, without thoughts, without convictions on any question requiring firmness of character; they are boulders ground smooth by the stronger minds around them. Give us four-square men and women, who have the courage to think and act for themselves; not reckless egotists who ignore the wisdom of experience, but men and women who are not boulders, whose characters in their strength, their purity and their independence are God's best evidences of immortality.

The student without self-reliance and judgment of his own may find himself in the position of the Englishman riding in a Devonshire lane, and coming upon a swampy-looking place he asked a rustic near by, "I say is there good, firm bottom here?" "Oh yea's, sir! that there be," was the reply. He rode on and was soon plunged in to the horse's girths. "Hello, you rascal, didn't you tell me there was good, firm bottom here?" So'a there be sir when you come to it, but you bean't half ways to the bottom yet."

One of the growing manias of the country to-day is to get a living without work. There seems to be a wide-spread feeling that manual labor is for those only who are uneducated. The West contains thousands of young men of fair education who will not accept anything but a clerkship, agency, or occupation of some kind or any kind that does not mean hard work. Apprentices to the trades, from among the American-born citizens, are becoming fewer every year.

Less than a week ago we asked a

hale, hearty man of seventy years who had as he said hewn his way through the timber of Indiana, what he would recommend as the best thing for a young man to do who wanted to earn an honorable success? "Sir," he replied, "the teachings of the last fifty years of my life all indicate that there is but one thing for a young man to do who wants to gain success, and that is to go to work." "Temperate living," he added, "and straightforward hard work toward a worthy object in life will make a tolerable fair sort of a man out of very common stuff." Whether the student chooses agriculture, one of the trades, merchandising or one of the professions as his vocation for a livelihood, must be determined in a measure by the tastes, inclinations, capital, etc. There is no existing law to prevent the man best fitted to make a reputation as a mechanic becoming a failure as a professional man, nor is there any known means of avoiding the misfortune of forcing from agriculture, where there is ample scope for their talents and their energies, the brightest youths.

The road to reform in a Republic is by way of the school-house and ballot-box. Cut down your schools and you can add to your jails and penitentiaries. To-day the poor man's hope against the aggregation of capital and the tyranny of monopolies is in the public school. Keep the masses in ignorance and you can make them slaves; give them nine months schooling every year and it will preserve our free republic. The State that keeps upon its statute-books the law that compels the education of its children wisely defends its own perpetuity. The student who leaves school to become an active citizen must share the responsibility of the State. The laws that govern our educational and business interests are the reflection of the people's will as expressed in their ballots. Public men and measures are as good as the people make them. In our republican form of government there is no reformation that the majority cannot secure. This places the responsibility upon the individual voter. We have but one observation in this connection and it is this: That the vote which the young man places in the ballot-box on any question, whether it involves principle or not, represents his individual character and intelligence. The young voter who fails to take with him to the polls his integrity, does not comprehend the grave responsibility of the citizen or the ballot.

As the student passes out into the world he hears the old story that the people are not as good as they used to be in times gone by; that there are no honest men or women. It is false as false can be. All history, all authentic statistics of crime show that the world is growing better, that civilization and education raises nations in the scale of intelligence and good morals. There are good and true men and women everywhere you go. Honor, love and charity are as pure in the human heart to-day as they ever were. Up from the slums, from the saloons and the gambling dens, comes the foul breath that would drag every life to that level.

We pass for one moment to the consideration of a danger that surrounds every student; one that has blighted and destroyed many of the best minds of the country. The gin-shop of the age is popularized as a social feature of our civilization. The student, surrounded by friends, professors and many personal influences, does not

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, JUNE 3, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.
ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE next term of the Agricultural College begins Thursday, August 24th, 1876.

WE want a three-line advertisement of every regular paper published in Kansas, for Centennial purposes. Please send copy. No charges to any body.

Again to the Front.

Kansas as a State seems constitutionally indisposed to lag behind in any good word or work. But especially does this spirit of progression seem to possess her in matters pertaining to her educational interests, whether of her higher State institutions or of her common school system. We doubt not that our readers have all had their attention called to an act of the last Legislature, by which action radical changes and additions in the qualifications demanded for teachers' higher grade certificates are introduced; but we wonder if they have paused for a moment to consider how much these changes mean, and how full of promise they are for the "new gospel" of practical scientific education. On consulting these revised school laws passed last winter, we find that not only does the State diploma, the five and the three year's certificates require upon the part of the applicant the usual familiarity with the elements of Physics, Physiology, Botany and Chemistry, but also that candidates for the "A" certificate of two years must prepare themselves in the elements of Entomology and of Agricultural Chemistry. And finally that certificates of the highest grade call for a satisfactory examination in the elements of Geology, "as far as relates to the manner of formation of soils and their adaptation to purposes of production."

Now all this of course means that if our would-be pedagogues are required to qualify themselves in all these branches, then as a natural sequence they must be taught in our common schools, the beginning of an end which practical educators the country over have long and devoutly prayed for. To be sure we doubt not at all that among our academic friends there will be no little quaking over what will seem to them a most sweeping and radical revolution. But they need give themselves little uneasiness.

The reform from its very nature must be a slow and gradual one. It need not and should never be allowed to interfere with the fundamental work of the common school—that thorough grounding in English and in Mathematics upon which all success in the study of after life must depend. But any teacher who from his own experience has seen the keen and eager relish

with which the young student welcomes the introduction of these studies in Natural Science, and what zest and enjoyment they give to what was before the plodding drudgery of school life, will look to this new system for the happiest results.

But there are obstacles in the way which we shall of ourselves be compelled to overcome. Foremost among these is the dearth of proper text-books for elementary instruction in these various branches. Indeed, we doubt if either in Geology, Entomology or Agricultural Chemistry a solitary book at all adapted to our real wants is in existence. And just here lies the chance for the friends of the new system. If the books we want are not within our reach we must make them ourselves, bearing in mind that in this elementary instruction our object is not so much to teach technicalities as to lay the ground-work for a practical and thorough understanding of the grand truths of each science. In fact, in these elementary little text-books the extended use of all merely technical language or terms, except so far as is required for accurate classification, should be scrupulously avoided. Leave the technicalities of the science for the more advanced course of college study. There is no science however abstruse whose elementary principles cannot be taught in the pure Queen's English.

Our readers will pardon the INDUSTRIALIST a little quiet glorification over this long educational stride to the front. It is a doctrine which for the past year or two it has preached faithfully. For it is by this that our whole school system of the State will become what it should be, not merely the drill-room of the handful of professionals for the pulpit and the bar, but the great workshop of our unnumbered host of young industrialists by whose intelligent energy and skill the fortunes of Kansas as a State are to be moulded.—[Prof. Wm. K. Kedzie.

The Danger and the Remedy.

As the warm weather advances the playful potato-bug growtheth apace. In fact the present outlook in this immediate vicinity very plainly promises another famine in early potatoes unless something is very speedily done to check the ravages of this insect. We are astonished to notice among many farmers hereabouts a decided tendency to give up the fight at the start and let the bug have its own way. Now nothing is more foolish or short-sighted than such a course. Of all our host of insect enemies there is not one which can be more easily routed than this same potato-bug.

The experience of farmers the United States over has plainly established the fact that in the cautious and skillful use of Paris green we have an absolute and certain prevention against this troublesome insect.

In the State of Michigan alone, during the memorable season of 1874, over one hundred tons of this poison were employed by the farmers for this purpose only.

Not the least danger need be apprehended in the use of the green as far as poisoning the potato-tubers is concerned. This is a popular fallacy which has long since been exploded. Most careful experiments followed by the most minute chemical analysis have shown that in no case where liberal quantities of the green have been used was there the slightest trace of arsenic, either in leaf, stalk or tuber of the potato. And this for the very good reason that, while almost perfectly insoluble itself, the instant it comes in contact with the soil it is converted into an absolutely inert condition by the hydrated oxide of iron existing in every soil.

Paris green is known in Europe as "Schweinfurt's green," and is therefore the simple aceto-arsenite of copper. In this country, however, it is largely adulterated with sulphate of barium, a useless substance added for the simple purpose of giving it weight, and which seriously impairs its efficacy as a poison. The quantity of this adulteration sometimes amounts to fifty per cent of the whole. Hence our friends, in buying Paris green at the drug stores, will notice that two or three grades are offered at different prices. Be sure and select the highest priced; it is the purest article, contains the least barytes and will prove cheapest in the long run.

Lastly, as to the method of application. The favorite process has heretofore been to place the mixture of one part of the green to twenty or more parts of flour or plaster in a thin muslin bag, and thus distribute, by gentle shaking over each potato-hill. We are, however, strongly of the opinion that another method now coming into favorite use in the East will be more to our purpose, viz: Place the proper amount of green in a bucket of water where it may be kept in suspension by rapid agitation, then with a small hand-broom or clothes-brush repeatedly dipped into the mixture it may be very evenly distributed, by shaking, in a fine spray over the entire plant. The advantages of this method are that the green adheres more closely to the potato leaves, and all danger of inhaling the poisonous dust by the operator is avoided. This last is particularly important in a State where high winds are as prevalent as with us. When the green is applied in the form of a dry mixture, a windy day immediately following is apt to prove of no little danger, especially if the potato patch happens to be in the kitchen garden where little children are at play. Several farmers hereabouts to whom we have recommended the sprinkling process have adopted it with admirable success.—[Prof. Wm. K. Kedzie.]

THE INDUSTRIALIST.

SATURDAY, JUNE 3, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:15 A. M., and 2:25 P. M.
Going West.....	8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

W. C. Stewart has his telegraph office in town this vacation.

Warm weather comes on gradually. Thermometer has not yet touched 90°.

Mrs. Frank Jackson and Miss Belle Perry have gone—where great people go—to the Centennial.

The illness of Sergeant McFarland prevents us from obtaining the meteorological report for this week.

See Major Hudson's admirable address for some most timely ideas concerning the problem of "Success in Life."

Wm. Ulrich has the contract for cutting the caps, sills and corners for the new buildings. His brother Ed. is assisting him.

One would think a young lumber-yard was being planted in this district to see the lumber of all kinds that is piled up out here.

C. A. Dow writes from Coffey county that he is well, is working hard, and "would not be without the INDUSTRIALIST for ten times its cost."

Mrs. Werden starts East next Monday morning. Her father who has a cancer will accompany her for the purpose of consulting with eastern physicians about that disease.

The floor is laid in the first story of the mechanical building. It looks odd down there, and when we hear any one walking over the floor we think he is coming up the stairs.

Miss Melva Sikes was in Manhattan this week attending the Sabbath School Institute, and called on us Friday morning. She is giving music lessons in Louisville this vacation.

Mr. Rains has purchased his paints for the new buildings ready mixed. He says this is very much cheaper than mixing them himself, besides insuring a uniform mixture of the colors.

We would urge those who have not but intend to renew their subscriptions to this paper, to do so immediately. We do not furnish back numbers, hence subscribers should be prompt with their renewals—sometimes called greenbacks.

In the department of Instrumental Music various changes have been made which, it is hoped, will not only increase the number of students in that department but greatly facilitate the teaching. Due notice will be given regarding the course to be pursued.

If you want to enjoy all the sensations of genuine "sea-sickness," go out and stand in a large wheat field on a windy day. If you are at all susceptible to this little disorder, the waving, billowy motion of the grain will give you the jimmies in short order.

Besides the work on the chemical laboratory and mechanical building, the main College building is undergoing considerable alterations. The main lower hall will be extended entirely through the building, so that the principal front entrance will hereafter be on the east end.

The semi-annual session of the State Horticultural Society will be held in Olathe, Wednesday and Thursday, June 6th and 7th. Prof. Gale, President of the Society, will leave Manhattan on Monday to attend this meeting and the Baptist State Convention at Lawrence on the 9th, 10th and 11th.

The citizens of Olathe have forwarded a pressing invitation to Pres. J. A. Anderson to act as Centennial orator at their great celebration on the 4th of July next. The President would undoubtedly be most happy to accommodate, but will hardly be able to return from Philadelphia for that purpose.

A concert was given in Junction City, Friday evening, May 26th, the proceeds of which were applied to the Centennial Hall now being erected in that city. Several parties, festivals and concerts have been given for this object with great success. We admire the enterprise which the Junction people show in this matter.

The Teachers' Institute held at Abilene last week was very pleasant and profitable. Messrs. Darius Hungerford and W. C. Howard and Mrs. Werden were present from this city. One of the evenings was devoted to a teachers' reunion, when they were given a better opportunity to become acquainted with one another. Music, ice cream and cake, etc., formed quite an agreeable part of the evening's entertainment.

The work on the laboratory building has been mostly under-ground so far, laying foundation, digging cellar under west wing, and building cellar walls. Next week, however, things will be in such shape that at the close of each day the workmen can see that they have done something. Messrs. Rains and Winne are crowding the work as rapidly as practicable, having in their employ thirty-eight men and eight teams.

The Western Independent, published at Hanover, Washington county, Kansas, in its last issue copies our article, by Prof. Shelton, entitled, "Is Kansas Naturally a Wool-Growing State?" and credits it to the Advertiser. We know of no Advertiser, and cannot conceive how the mistake was made when the author's name was attached to the article. This is not an infrequent occurrence. Newspapers ought to exercise more care in this respect and give proper credit to copied articles.

The Season of '76.

We suspect our readers need hardly be told that we are now enjoying one of the finest growing seasons in the whole history of Kansas. The spring to be sure was perhaps a little tardy, and certainly a little under the mean temperature; but when once under way every green thing has rushed ahead evidently determined to make up for lost time.

In the matter of frequent and evenly distributed rain-falls, we could hardly have arranged the thing better ourselves. Just look at the following table of rain-fall, for the two growing months of April and May, for the past three seasons of '74, '75 and '76:

April.....	1876—7.52	1875—1.60	1874—1.40
May.....	1876—5.63	1875—2.40	1874—2.98

These figures speak emphatically for themselves. The present is a season of abundant promise, full of encouragement and hope for the fortunes of Kansas, for the reason that there is hardly an interest in our State, political, social or educational, that is not directly dependent for its well-being upon "the state of the crops." K.

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E. GALE, Loan Commissioner,
Manhattan, Kan.

[Concluded from second page.]

learn the power and treachery of alcohol in all its forms until he steps to one side to make his first experiment alone. Great success or great misfortune tries his nerve; the high social cast of those who offer the tempting glass, the bright witticisms and the pleasant acquaintances that gather around the respectable drinker, dazzle and capture the young man, and one step taken means another until the taste is formed and the power to stop is gone. The occasional glass is the first step toward poverty, sorrow and disgrace. Let samples from the saloon-counter be placed under every corner-stone of our jails, our poor-houses and our penitentiaries, a just tribute to the power that places most of the inmates there.

And you ask, Is this a part of the Student's Problem? Aye, with battles lost, crime increased, and property and labor severely taxed to sustain the misfortunes and crimes of whiskey; with the widows and orphans and bankrupt homes everywhere appealing for a stay of the terrible curse, I would that I had the power to reach every student's heart and make him forever the deadly enemy of the gin-shop. Whether it is in the gilded palace or in the frontier shanty that the tempter comes; whether he is high or low, rich or poor; if you would make him your friend, if you would have his respect, look him squarely in the face and without shuffling or equivocation say to him, "Sir, I do not drink liquors." There is no half-way ground; the man strong enough to compel success carries with him the passions that give to him a consuming desire to drink deeply when the taste is once formed. It deadens, destroys and damns; it burns and kills the mind, the body and soul; the Moloch of the age to whom thousands of living victims are sacrificed.

There comes to every man and woman, frequently to some, the strongest tests of their strength and power, calling into play all the training and discipline of their previous lives. In these supreme moments they go down sometimes as the strong oak does in a fierce storm or they outlive the gale as a well-built ship. Nature tells us in a hundred ways that strength is of slow growth; how the grand old forest tree that stands a tower of strength required a century to grow to perfection from a little germ. There is no forcing process known to science or art which will give firmness of grain and texture together with strength to mushroom growths.

Our lives are but old stories, repeated by nature for a thousand ages. Take a section of a life as you would from the trunk of a tree, each year shows from the heart to the bark the growth, blight and scars of the storms as plainly as the rings of the tree. One year the growth is equal all around; the next year it is one-sided, and sometimes the circles of growth all dwarf down to a point as they approach a decayed spot that reaches from the center to the outer circle. All have some marks to show the contest for life, but thank God all are not rotten at the heart. There is no mistake so common in our first efforts at business as the defiance of this principle of growth. The determination is to force a success by new and patent methods. The growth of the summer may be of richest promise and like the tall corn when harvested too soon sours in the crib, or like the unripe fruit it withers and fails to keep. Show me the farmer, the mechanician, lawyer, doctor or minister who, when

his apprenticeship is ended or his collegiate course completed and he enters upon his active career, stops his investigations, his endeavors to learn, and I will show you a failure.

You may have observed the young lady going home from school with her diploma putting away her music, hanging on the parlor walls her first attempts at mixing colors; and the young gentleman graduate with his new diploma settling down in the consciousness of having only to await the glory and greatness that the world must give to scholarship. Instead of taking the implements of learning placed in their hands and digging for ore that must not only be dug out of the mountain but must be put through the mill and the smelting furnace and receive the stamp of the mint before it can pass as good coin, they wait for appreciation as a business, the world and its workers move on, they are left, proofs of the old, old maxim, "That the gods help those who help themselves."

Gentlemen of the Board of Regents, the noblest work your Institution is doing is teaching that intelligent labor excels routine force; that the lessons of the class-room assist the student to higher results in the field, the shop and the stable. You are removing the false idea that the manual laborer must be an ignorant man. Our cities and our towns to-day swarm with bright young men who will not work; young men who have determined that their text-book knowledge fits them to begin half way up the ladder. I have no platitudes to present to you upon the dignity of labor; that dignity all lies in the head and the heart of the man behind the plow, the anvil, or the printing press. Every man who earns his bread honestly by his muscle alone is entitled to a thousand-fold more respect than the college graduate who becomes a loafer on the strength of his diploma and lives by his wits alone.

Your Institution here occupies a new and undeveloped field. In the face of old systems it presumes to demand for the agriculturist and the mechanic such an education as best fits them to pursue their vocations intelligibly, with influence and for profit. It is also broadening the sphere of woman's labor. You are paving the way for her to receive the same compensation for similar labor that is paid to men, a simple act of justice that prejudice has long prevented. Your bold innovation in making a curriculum for the people, giving preferences to sciences and arts that concern every-day life, ignoring ancient traditions, preferring the living to the dead, is a grand progressive step for labor, for justice and for common sense.

Mr. President, in conclusion permit me to say that the student here in the centre of the continent sees around him, in the full tide of development, the great new West with its thousands of avenues for labor and enterprise open to him on every side. The press, the telegraph and the railroad join the cotton fields of the South with the corn and wheat fields of the North, the mining and grazing regions of the West with the markets of the East; while our rich valleys and broad prairies only await skill and industry to make them give forth their latent wealth. The water-courses that penetrate every county of our State have for ages silently carried down to the sea the power which will yet convert the raw material which our limitless fields produce into fabrics and implements of economy and use,

bringing wealth to the producer and manufacturer.

It is not corn or cotton or money that is king, but intelligence. Intelligence is king and will be forever. It tunnels our mountains, bridges our rivers, builds our cities, makes our country. The forces that draw our plows, our reapers, our mills, our trains are guided to perform their wonderful works by the mind, the will, the judgment behind them. The horse is a noble animal of power, the engine a grand achievement of genius, but without the directing mind of man, disciplined, drilled, cultivated to direct, there would be no result. The occupations of men take rank as they demand intelligence to perfect success. These broad rich acres, these undeveloped water-powers, these beds of gypsum, salt and coal are our opportunities.

Looking back over the century fast drawing to a close, the student appreciates the gigantic strides of progress in science and literature and art, as applied to the every-day affairs of life. Looking forward into the next century he may without violence to the possibilities make advances we cannot now imagine. In whatever field of labor he applies himself to the working out of his problem, whether his be a success or a failure, he may take the records of human experience as unimpeachable testimony that the world will appreciate and recognize for their full value his best endeavors.

Dr. Patee.

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The Annals of Kansas, by Daniel W. Wilder
Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

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THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

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Kansas and its Industries.

[An Oration delivered by Alphonso R. Oursler, of the Diagnothean Literary Society, at the Under-Graduates' Exhibition of the Kansas State Agricultural College, Tuesday evening, May 16th, 1876.]

Twenty-two years ago Kansas contained not a town or settlement of whites. The only inhabitants within its boundaries except Indians were a few traders, Missourians and Indian agents. A few years previous the western limits of Missouri were regarded as the outer verge of civilization, and the domain of Kansas as a part of the "great American Sahara" over which farms, towns and cities could never be spread, fit only for the wanderings of the nomadic savage, the prowlings of the wolf and the range of the buffalo. It was designated on the map, "Great American Desert," a desolate and sterile waste. It was covered for one hundred miles back of the Missouri with reservations for the Indians, guaranteed to them in perpetuity for homes by the general government. But during the immigration to the Pacific coast this country became more familiarly known. Travelers in passing through it were struck with its fertility, beauty and grandeur, and wrote back to their friends glowing descriptions of this magnificent country in the far West.

The territory of Kansas was organized and opened to settlement in 1854, under the Kansas-Nebraska bill which contained a provision that the inhabitants should decide for themselves whether to admit the institution of slavery or not. It proposed also, in addition to its other provisions, the repeal of the Missouri compromise of 1820, an act which forever prohibited slavery in all new States north of latitude 36° 30'. This movement was an act of, by and for the slavery element of the South. The compromise act emanating from the slavery faction and becoming a law by their assistance had been accepted by the North as a sacred pledge that the South would no more infringe upon the rights of free labor. But when the givers broke this pledge, declaring it henceforth inoperative and void, the North, enraged by such a violation, resolved to confront slavery on the soil of Kansas and assert the rights of free labor by other means than the workings of unfair legislation. And thus were brought into Kansas the two great opposing elements of the nation. The one determined to establish its institution of slavery here at all hazards, and the other opposed to slavery from the same moral and political considerations which had influenced the founders of the republic. The North, radical in principle, opposed the

extension and growth of slavery by all constitutional means, and resolved never to yield Kansas to it but to rescue her from its grasp.

Thus stood the sectional parties when the irrepressible conflict which had been waged since the childhood of the republic was transferred from the legislative halls of the nation to the fair and virgin prairies of Kansas, to be renewed with the fury and desperation of the death-grapple. The struggle in Kansas, though not marked by great battles or frightful carnage, was none the less fierce and dreadful. Plans, deep, dark and far-reaching, laid by the great minds of the nation, found their execution on this soil. Worse than civil war reigned, worse than its con-comitant evils prevailed. With all its natural advantages for honest and productive labor Kansas was destined for many years to be the arena of other events. These broad acres of most productive soil were not to yield up their bountiful harvest until over them should be decided a question which had for forty years agitated the union of this nation, and this soil is made sacred by the memory that on it the rights of free labor were first successfully contested for, in the honor of a nation's principle and in behalf of four millions of oppressed people to whom were given the inalienable rights for which our forefathers fought a hundred years ago.

After twelve years of excitement and turmoil have followed peace and quiet, and the people have turned to the work of developing the resources of the State, which are found to be many and profitable, and although by droughts and invasions of the locust the claims of Kansas as the garden of the West have often been disputed, yet on account of the exceeding fertility of the soil one harvest only is sufficient to re-establish her deserved title. It is not remarkable that Kansas should have made such rapid progress when we consider its pleasant and healthful climate, genial sun and fructifying rains, influencing a soil unsurpassed in richness, making the products of agriculture almost unlimited both in extent and variety, thus laying a firm foundation for innumerable important industries.

Agriculture is of course the first and leading industry of Kansas, giving occupation to a great majority of the population. This industry is being rapidly enlarged by the increasing area of land cultivated, and the labor involved is being made more effective by the development and practical application of the art of farming. Abundant evidences are apparent even to the superficial observer of the increasing interest of the people in the advancement of agricultural science, of the quickening mental activity of farmers as shown by the widening demand for agricultural books, magazines, newspapers, and by supporting, above other schools of instruction, a College in which the coming farmer may not only learn the art of cultivating the soil, but acquire other knowledge essential to success in his occupation, the need of which former generations have so strongly felt. Other

evidences are the disposition to experiment, test alleged improvements and adopt labor-saving expedients, a growing inclination to employ in agriculture money, business energy and active enterprise, which are so successfully employed in other pursuits.

They see that to plow deep and cultivate much are not the only requisites to success but that to know the soil, to understand its condition, to be able to supply its lacking ingredient and to devise the best rotation of crops, are all items of importance. And these are not the only considerations to success in agriculture, from the fact that the value of a farm and the price of its products depend upon the position of its market, that the profit depends on the amount of tax the farmer has to pay and also the ability to compete with monopolies. These are all such important elements to agricultural prosperity that they have as much interest to the farmer as the fertility of the soil. Effort is being made with good effect in the first of these considerations by the establishment and encouragement of manufactories for the crude products of the farm. They are beginning to protect themselves in the second, by paying as much attention to the politics of our country as will enable them to know when they are over-governed or properly governed, and to ferret out fraud, punish the perpetrators and fill the offices of public trust with honest men from their own calling. And the third, by an organization for mutual protection through which they are enabled to command such prices for their products as will sustain them in this production.

Manufacturing is the next industry of great interest which is attracting the attention of the people, and is of vital importance to the agriculturist because it brings the market home to them and settles to a great extent the vexing question of transportation. Without the manufacturers in the State the farmer is obliged to pay the exorbitant prices he does for the articles manufactured from his own products which, besides paying the real value, must pay in addition transportation both ways to distant markets. Without manufactories Kansas is paying the wages of and supporting thousands of laborers in the eastern States, thus continually draining the State of its money. But with manufactories the thousands of laborers would be brought here and would create a home market. The labor would be paid for within our own limits and consequently would give a money circulation wholly within the State, and instead of having the flow of money to the East, the current would be reversed by the sale to the East of the surplus of our manufactured articles.

There is no question about Kansas having the best facilities for manufactories. The country affords good water-power, coal is found in abundance in almost every part of the State. The articles are here to be manufactured, and all that Kansas needs to make it a prosperous State is capital invested in manufactories. In agriculture Kansas

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, JUNE 10, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE next term of the Agricultural College begins Thursday, August 24th, 1876.

WE want a three-line advertisement of every regular paper published in Kansas, for Centennial purposes. Please send copy. No charges to any body.

IN many parts of the State the complaint goes up that wheat is rusting badly. This is not a matter of surprise after the bright suns and heavy downfall of moisture of the last two months. But, although we have examined several fields that were badly rusted, we have yet to see a single case about which serious apprehension need be felt. The disease as thus far developed is "leaf rust." The stalk of the plant so far as we have observed is uninjured, and the development of the "berry" remains unchecked. While the fungus is confined to the leaf the grain will not be impaired. We might add that the cool, dry weather of the last few days has been a most effectual check upon the further spread of the rust.

WE are just in receipt of a very interesting communication from Greeley, Colorado, showing how the wheat-growers of that section have succeeded, after a desperate struggle, in beating off the grasshoppers. The writer, after stating that about six weeks ago the hoppers hatched out in countless myriads, says: "But everybody went to work and fought them, and now the wheat in general is out of danger unless the winged insects light upon us from other localities. As soon as they were hatched out and before they were large enough to hop out of the way we covered them with a thin layer of straw, and thus burned bushels of them. When they become large enough to cross the ditches we pour kerosene upon the water and this, floating out in a thin film upon the surface, kills them as soon as they come in contact with it."

The kerosene plan is certainly a new one, albeit we having no irrigating ditches the plan is to us merely suggestive. But Kansas farmers ought to get a valuable hint from this general experience of their Colorado brethren. If in their native haunts, where grasshoppers are a thing of well-nigh every year and in numbers never dreamed of in Kansas, these insect pests can be subdued and good crops made, our farmers can afford to dismiss the bugbear of grasshoppers from their imaginations, at least so far as the insects in the young state is concerned.—[Prof. E. M. Shelton.]

Alfalfa and Plaster.

In an article which appeared in the INDUSTRIALIST of May 27th, we expressed the opinion that our small field of alfalfa would yield fully one and one-half tons of cured hay per acre. Since that article was written we have cut and carefully weighed a measured portion of the field, a fair average of the whole, and we find that we have greatly under-estimated the crop. This alfalfa was cut on May 27th and weighed May 31st, and during the four days intervening the hay was turned three times and thoroughly cured. The piece cut yielded at the rate of 2.30 tons per acre.

The portion of the field recently cut was, early in the season, laid off into five experimental plats, each 2x4 rods in size, for the purpose of accurately testing the efficacy of plaster or gypsum upon alfalfa. To every alternate plat eight pounds of plaster were applied, being at the rate of one hundred and sixty pounds per acre. The subsequent occupation of one of the plats and part of another as a building site forced us to use two half plats and two whole ones; one of the half plats and one of the whole ones, to which nothing had been applied, being adjacent respectively the half and whole plats which had received the application of plaster. The plaster was applied April 27th, and as above mentioned the alfalfa was cut just one month from that date.

The weighing of May 31st shows for the first half plat to which plaster had been applied 119½ pounds of hay, and for the half plat adjacent to which nothing had been applied 113½ pounds; for the plastered whole plat 238 pounds, and for the whole plat to which nothing had been applied 219½ pounds of hay. The comparative yields per acre of the plastered and nothing plats will be shown at a glance by the following figures: Plastered plats, 4,776 pounds per acre; nothing plats, 4,410 pounds; showing for the application of 160 pounds of plaster an increased yield of 326 pounds of hay.

Before cutting, a marked difference in the plats could be seen. The plastered plats showing a darker color and more luxuriant growth than the unplastered. More marked results might have been expected had we been able to apply the plaster at an earlier date than April 27th. This, however, the impassable condition of the roads during the early spring rendered impossible. We ought to add that the article used in the above experiment was of Kansas manufacture, having been manufactured by J. V. Coon & Son, Blue Rapids, Kansas.

Recent experience has quite confirmed our suspicions as to the quality of alfalfa hay. While cattle and horses eat it with considerable relish, it is noteworthy that after each feed there remains in the mangers a large amount of coarse stalks that are worthless for any thing except the manure pile.—[Prof. E. M. Shelton.]

East and West.

[Extract from article in Country Gentleman.]

Now, we shall be very glad to see all sorts of manufactures set on foot and made to flourish, wherever, throughout the wide extent of our national domain, there may be opportunity of conducting them profitably. But we think it ill-advised and illogical to stigmatize any interchange of products between different parts of the country, as a process of tribute-paying by one to the other. Pray, why is it not as well to speak of New York and New England as paying tribute to the West, in purchasing from her the wheat and meat they consume for food, the corn they buy for their stock and the wool they weave for their apparel? If the West complains that its resources go to build up the wealth of the East, whence, let me ask, came the money that has sprinkled nearly all the great plateau between the Alleghanies and the Rocky Mountains with populous cities, and connected them with an almost universal net-work of railways, but out of the earnings of those who buy western grain and meats and wool? * *

So long as labor on the whole yields a better return applied to agricultural than to manufacturing pursuits at the West, or in any part of the country, so long its inhabitants will find that they can buy their manufactured goods cheaper than they can make them. There is no question of tribute about it, one way or the other. The result of the labor of one man in one way is exchanged for the result of the labor of another in another way, each individual, or each greater or smaller portion of a country, taking up that class of vocations which experience shows to be there most advantageous. And if we come to the support of enterprises of any kind with the sectional argument that such a mutual interchange of labor-products is one whit more to the advantage of one party to the bargain than it is to the other,—and some such position as this characterizes a great deal of the present popular speech-making and newspaper-writing of the West—we believe that real progress in the desired direction is thereby much more likely to be retarded than advanced, aside from the tendency which all arguments of the kind exert to blind the thoughtless as to the real unity of interests, in which, as we firmly believe, the entire country is and ever should remain an indissoluble whole.

As between East and West, then, if comparisons are invoked, how do matters actually stand? Do we buy her harvests and her kine because we could not feed our own population at home? Let the vast areas of unimproved land, in all parts of the eastern States, reply. Let the falling value of so many of our farms, and the diminishing population of so many of our rural districts, tell their story of the results of western competition. The truth is that the people of New England have been driven into manufacturing by the far West. Her farmers may not unaptly or unjustly point to the fact that the benefit they might derive from "home markets for their products" is mainly swept out of their grasp by the cheaper products of the prairies. And they are perhaps excusable for some lack of sympathy in the groans of their western brethren over the "exactions and extortions of railroad monopolies," when they remember that even here all the advantage rests with the West, through rates being invariably far lower in proportion than any terms the eastern farmer can secure.

THE INDUSTRIALIST.

SATURDAY, JUNE 10, 1876.

TIME-TABLE OF THE K. P. RAILWAY. PASSENGER ARRIVES.

Going East..... 10:45 A. M.
Going West..... 3:47 P. M.

FREIGHT ARRIVES.

Going East..... 12:15 A. M., and 2:25 P. M.
Going West..... 8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Work has commenced on the cellar of the horticultural building.

A new guitar and an instruction book for sale. Price \$20. Inquire at this office.

Our next issue will contain L. B. Roger's oration entitled, "The Growth of Ideas."

We hear quite favorable reports of the progress of the school in Randolph, taught by H. S. Maynard.

The doors, door-frames, windows and window-frames for the new building are nearly all ready for their respective places.

The south doors in the mechanical building, fastened on the inside by a huge bar, were blown open by the wind on Wednesday night.

Two wooden out-houses, with stone foundations, are being erected about sixty feet from the north side of the College building and forty feet apart.

Prof. Shelton went West Friday on a visit to Durham Park, in Marion county. He will be gone nearly a week, and will return by way of Clay Center.

The foundation of the laboratory building is finished, the masons are now laying the walls, and the carpenters are putting in the joists and door and window-frames.

Hod & Carrier is the name of the new firm at work upon the laboratory building. Mr. Carrier seems to be quite an enterprising gentleman, and Mr. Hod is indispensable to the success of the firm.

Miss Nellie Sawyer passed through Manhattan Tuesday evening en route to Milford, Davis county. She is teaching school in that village, Miss Kate Ward, to whom the school was first given, having gone East.

The trees set out near the College the past spring are doing finely. Very few of them have died. In a few years those situated on either side of the walk between the buildings will afford a splendid protection from the wind and sun, thus being useful as well as ornamental.

J. E. Williamson writes us from Newman, Kas., under date of June 5th, saying:

"Enclosed please find seventy-five cents. I must have the INDUSTRIALIST. All crops about here look well. The farmers are encouraged, and are busily planning for a grand celebration, somewhere in this valley, on the Fourth."

We are in receipt of a letter from President Anderson, dated New York, May 31st. The students and many friends of the President throughout the State will be glad to know that his health is slowly mending, under the influence of the rest he has so long and imperatively needed. He started for Philadelphia June 1st.

The anti-herd law convention held in this city on Saturday last, seems to have been an immense success so far as numbers and enthusiasm are concerned. While the friends of the herd law are becoming bolder and more aggressive, it becomes apparent that the anti-herd law men are not going to abandon fences without a violent struggle.

Mr. T. B. Morgan and Johnny Griffing deserve praise for the great amount of work which they have done on the College farm this last spring. You can judge pretty well by the condition of a farmer's corn field how thorough he is in his work,

and we know that the fields of corn on the farm are almost entirely free from weeds and in first-class condition.

We have had very disagreeable weather the past week—heavy winds, any amount of dust and no showers. The elements have certainly taken advantage of the sickness of our signal service man and gone on a spree; however, he will be at his post again next week, when the citizens of Manhattan can confidently look for a change for the better in the weather.

Later.—We take it all back. We are having a splendid rain as we go to press.

In a letter from L. B. Rogers, of Solomon City, Dickinson county, we read as follows: "Crops are looking nicely here now. Preparations are being made to put in a large amount of wheat in these parts this fall, probably several times as much as was done last fall." We wish more of the students would write us as to what they are doing, what is going on in their localities, and anything else they may deem of interest. Why can't we in this way keep the Students' Column full every week?

Prof. Lee's team ran away last Tuesday, throwing him under the wagon, which was loaded with wool, and causing two of the wheels to pass over him. Fortunately he was not seriously injured. The horses finally freed themselves from everything but the front wheels and axle, and with these they ran a distance of four miles, starting from the Professor's residence on College Hill, going down through Manhattan, and coming to a stand-still on the east side of the Kansas river.

The following is the course to be pursued in the Department of Instrumental Music the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

Dr. Patee.

20-tf

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Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects imatical to the Kansas Farmer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

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[Concluded from first page.]

excels, but without the manufactory it cannot sustain an equilibrium in commerce with other States, and without this equilibrium money cannot be kept within the State, and without money the State cannot prosper.

Kansas in the twenty-second year of its existence has a population of over five hundred and twenty thousand inhabitants, who as a class are enlightened, intelligent and industrious. It has nearly five million acres of improved land; is larger than the whole of New England. In proportion to the number of its population it is second to none, and is far in advance of many of its sister States in its religious and educational institutions. It is the centre of the union and indeed is one of the brightest stars in the constellation of States, and doubtless at the Centennial, in competition with other States, it will add many honors to its list, and in competition with other nations honor to that of its own nation.

THE Manhattan INDUSTRIALIST makes the statement that since the establishment of the signal station at the Agricultural College, the rain-fall in that part of the State has steadily increased; therefore the weather observations at that point should be continued, as they not only chronicle but also attract moisture. We can improve on that; ever since we commenced composition on the Lantern, the amount of rain, snow and hail which has fallen is remarkable. There has not been a period of six weeks within the memory of the oldest inhabitant during which we have received such an abundant supply of dampness; therefore our little paper is a decided benefit to the country, both in the literary and agricultural field, and any farmer wishing to guard against the droughts of summer should not fail to subscribe for it, and at the same time we have been confidentially informed that the other county papers are dry.—[Blue Rapids Lantern.]

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Nationalist, MANHATTAN. A Republican Reform weekly. Contains reports of Blumont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year. A. Griffin, Editor and Proprietor. 4-1m

Courant, COTTONWOOD FALLS. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 1-1m

KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

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The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

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No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JUNE 17, 1876.

No. 9.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

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Advertising rates made known on application.
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The Growth of Ideas.

[An oration delivered by Louis B. Rogers, of the Webster Literary Society, at the Under-Graduates' Exhibition of the Kansas State Agricultural College, Tuesday evening, May 16th, 1876.]

In the material world things reach maturity only by a gradual development. The stalwart man has grown from the tottering babe; the giant oak by taking on particle after particle has come from the little sprout; the splendid palace by the laying of one stone upon another has been raised from the rude basement. So it is in the world of thought. Ideas of the utmost importance grow from the slightest beginnings. As they pass down through the course of time they take on new additions from every hand. They are taken up and built upon by the men of every succeeding age and are thus kept always increasing. Each generation adds something to the stock of those that went before it, and transmits the whole to those that follow. In this way has the present state of human affairs been reached. Thus it comes that we who live to-day are "The heirs of all the ages in the foremost files of time."

Our political institutions, our religious endowments and mechanical improvements have all come to us through the process of a long continued growth. Not one has sprung suddenly into existence, and some have been ages in acquiring their present condition. Our mechanical improvements have usually had their origin, not in some great discovery, but in some trivial observation which has served as a nucleus about which to gather material. The steam-engine, which is daily making achievements incalculable in their benefits to man, was seen in miniature by the first of Eve's daughters who used a tea-kettle. When she saw the lid forced up by the steam, she beheld the working of that force which is now brought into such useful employment. The electric telegraph so indispensable to us, which enables us to gird the world about with our thoughts in a minute, and which has brought the dwellers on the plains of Kansas to be near neighbors of those on the hills of New England, has grown up from a slight observation made in 1790 by Galvani, of Italy. He noticed that in the limbs of a frog when brought in contact with two dissimilar metals, a twitching motion was produced. This being attributed to electricity led on to other discoveries and from it, after a numerous train of observations and experiments, has come that wonderful combination which we possess in the electric telegraph. The steam-plow now in use which turns over acres of soil at a single sweep, and the harvester that passes through

a field and transfers the grain directly from the stalk to the sack, are outgrowths from the crooked-stick plow and the jack-knife reaper and flail thresher once used by the farmer. Between these extremes farming implements have passed through every conceivable grade of transformation. Thus in all departments of industry the innumerable aids to production have developed from the simplest tools to the most complicated machinery.

Ideas with regard to education have had a similar growth. In the early part of modern times it was thought that education was not to be shared by the mass of the people. All educational advantages were monopolized by a very few. But little by little the idea that knowledge is power became general. Men were thus stimulated to extra exertions, and as a result learning was drawn out from the dusty cloister and diffused throughout the world. Yet to accomplish this has taken time. It has been done gradually. Provision was made at first for the education of a certain privileged class whilst all others were excluded. This privileged class has enlarged from time to time until in our day it has come to embrace the persons of every department of life. Even the farmer who hitherto has been utterly ignored at last steps forward and demands a share.

While the means of popular education have improved, knowledge itself has advanced. The rapid growth of modern science has been remarkable. Many truths which a few centuries ago were uncertain or unknown are now by its aid experimentally established. By its aid not only has man explored the heavens and traced out the courses of the stars, but has explained the once mysterious though common phenomena of nature and brought her subtlest forces under his control. Thousands of her votaries are daily toiling to extend the ideas of science.

The same development has taken place in the course of religious sentiment. Luther and his contemporaries took but the first step in the great reformation that was to follow. Long after their time religion continued to struggle with civil power; and not till the establishment of the American government were the church and State completely separated and the freedom of conscience permanently secured.

Ideas of government have had a like growth with those of all other departments of science. During the middle ages the whole of Europe was ruled by a system of feudal despotism. The country was divided into numerous small districts, and a horde of petty lords exercised over their vassals an absolute dominion. But, as these lords were not accountable to any superior for their conduct, there was engendered in them a spirit of freedom. That spirit gradually spread itself through the whole body of society, and has since grown into the exalted idea now entertained of personal liberty. These lords were occasionally called together by their prince and consulted in council. As each went to represent

his own district, there gradually grew up the system of representative legislation which took its first definite form in the British parliament. So, for the seed of liberty and order, we may seek in the chaotic society of the middle ages. That seed, planted in the deep soil of christianity and fed by the nourishing breath of an increasing intelligence, has developed into the perfectly free representative government under which we live.

No other thing probably has done so much to assist this wonderful growth as the art of printing. By its means a thought once advanced has been permanently fixed; literature has been made cheap and plenty, and thus those ideas already existing placed within reach of every individual.

Keeping pace with this general growth of ideas has been a uniform progress of popular sentiments. Many of the social vices which were once tolerated are now become detestable. The old love for war and thirst for conquest have given way to a growing partiality for peace; and the old bloody means of settling national disputes has been replaced by the more humane one of arbitration.

We are fortunate to live in this advanced age. We enjoy the fruits of the growth of centuries. All the past has been working for our good, and every generation has contributed something to make us what we are. In our time all things work together for the spread of knowledge. Every breeze wafts intelligence; every wave rolls it; all give it off, and all in turn receive it. The whole world is becoming a common field for intellect to act in. There is a vast commerce of ideas. There are marts and exchanges for intellectual discoveries; and there is a wonderful co-operation of individual intelligence, which is continually enlarging the boundaries of thought. The great wealth of ideas can never cease to grow. The whole vast harvest that we are now gathering is but so much ripened seed, and no estimate can possibly be made of the amount of the ultimate product.

The new Alma salt well is down 300 feet.

All southern Kansas is busy reaping a golden harvest.

The contract has been let to dam the Kaw river at Topeka.

Increase of wheat acreage in Butler county over last year 100 per cent.

Only seven States have more miles of railroad than Kansas.

All bonds issued by the State of Kansas, and maturing July 1st, 1876, will be paid on and after June 25th, 1876.

The average slope or descent of Kansas is seven and one-half feet to the mile, and from the northwest to the southeast.

The aggregate value of wheat and corn alone produced in Kansas for the year 1875 was \$28,529,257.32. There were 80,798,769 bushels of corn, and 10,046,116 bushels of wheat. The crop of 1876 promises to be just as large and profitable.

THE INDUSTRIALIST.

SATURDAY, JUNE 17, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE next term of the Agricultural College begins Thursday, August 24th, 1876.

WE want a three-line advertisement of every regular paper published in Kansas, for Centennial purposes. Please send copy. No charges to any body.

The Cattle Doctor.

There is no one matter connected with the general subject of agriculture about which farmers generally are so profoundly ignorant as the anatomy and physiology of domestic animals, and especially cattle and swine. As a result they have been imposed upon time out of mind by a race of practitioners called cattle doctors, of whom it is hardly possible to speak temperately. The theory and practice of these men have at least the merit of simplicity. All the diseases of the bovine tribe are classed under two or three convenient heads, usually the "murrain" or "hollow horn," and in their treatment a knife and fleams for bleeding, a horn or bottle for drenching, and a gimlet to relieve the sufferer from "hollow horn" are all the instruments needed. It is better a thousand times, and more humane every way, to let the poor brute suffer totally neglected than to allow ignorant quacks to add to its torments.

Beyond the use of a few simple remedies no attempt should be made to doctor sick cattle by any one, unless it be the educated and experienced physician. The true course for the general farmer to pursue, and the one easiest to follow, is to aim to prevent disease by judicious feeding and general treatment. The stomach of the ruminant is a complicated apparatus, and a large proportion of the diseases to which neat cattle are subject grows out of the disarrangement of this complex organ. It follows from this that good food and water given in proper quantities and at the proper time are sufficient to make the farmer and stockman well-nigh independent of the cattle doctor.

Every farmer should be so familiar with his dumb charges that he is able to recognize the first appearance of distress in them. If the animal appears "dumpish" and is "off its feed," all dry and constipating food should be instantly removed, and for these, bran mashes, roots and bran should be substituted. Change of diet is as much a necessity to domestic animals as to the human subject, and, besides being a preventative of disease, adds largely to the productiveness of the herd. The stockman who has once provided himself with a few acres of rye for winter and early spring pasturage,

and a pit full of roots, will consider these necessities ever afterwards. By giving a feed of roots three or four times a week, or in lieu of this a few hours of rye pasturage, all the unpleasant effects of a constipating diet may be obviated.

As a preventative measure milch cows should receive constant attention just before and at the time of calving. The udder should never be allowed to become hard and inflamed, but if the flow of milk is considerable before calving it should be regularly removed. By strict attention to this matter and by carefully protecting the animal from exposure, and by feeding lightly of cooling, nutritious foods after calving, milk fever may be nearly always avoided. We say, then, substitute forethought and afterthought for the services of the cattle doctor; but if it becomes necessary to call in the services of the professional employ only the experienced veterinarian.—[Prof. E. M. Shelton.

The Summer-Fallow.

The history of wheat growing in all countries having a progressive agriculture is the same. In the timbered sections of the East and in the great prairie regions of the West, the process differs in detail but not in principle. In both these regions the early settler finds ready to his hand a soil that he fondly believes is inexhaustibly fertile, made thus fertile by the persistent action of the elements through long ages. In the timbered land the settler has only to burn the timber and roughly harrow the ashes and charred vegetation in preparation of the seed-bed; upon the prairie a single shallow plowing and one or two harrowings fit the ground for the reception of the seed. In either case the best crops are produced the first and second years of cultivation, and these progressively diminish in rapidity inversely proportionate to the original fertility of the soil, and directly as the seasons are favorable.

If from natural causes, such as drouth, the crop taken from the soil is reduced to a minimum, exhaustion proceeds at a slow pace, but even then it proceeds. Finally, if this process be allowed to proceed unchecked by the application of fertilizers or by more thorough cultivation, the soil attains to what Mr. J. B. Lawes calls its "natural strength." What is meant by the "natural strength" of a soil will be best understood by an illustration. In eastern New York and in certain parts of New England loose sands produce with certainty, and without the application of fertilizers, eight to ten bushels of rye once in two years. In like manner crops of barley have been harvested for thousands of years, and without doubt this process might go on for thousands of years to come. This eight or ten bushels per acre is the "natural strength" of the

soil, and it may be above or below the cost of production; if below the cost of production the soil is said to be "exhausted."

Exhaustion and fouling with weeds are the ultimate conditions of every soil that has been injudiciously managed through any considerable length of time. How to maintain the fertility of the soil and rid the land of weeds is a pertinent question in Kansas agriculture to-day. We believe that the subject named at the head of this article is the most available means within the reach of Kansas farmers for the accomplishment of this object. In the oldest settled portions of Michigan and New York a good crop of wheat is never expected without the preliminary fallow or manuring, or both, and what is true of these States will at no distant day be true of Kansas, even in her most favored wheat regions.

We suggest that our farmers do not wait until their soils have reached their "natural strength." A good general rule for farmers whose lands are failing perceptibly, would be to summer-fallow every part of the farm at least once in four years. The practice of the summer-fallow may be briefly stated thus: Plow the land deeply and well in May or June, and after the weeds have begun to show themselves harrow or cultivate thoroughly. In August cross-plow and harrow, and your land is ready for the seed. If land is very foul it may be necessary to plow three and even four times. But it should be borne in mind that this thorough tillage is not alone for the following wheat crop; it will be a positive benefit to three or four succeeding crops.

Wheat growing, in the agricultural growth of a nation, may be said to pass through three well defined stages: 1. The scouring system of pioneer life in which crop follows crop without any return being made to the soil, until it cries for quarter. 2. The summer-fallow and green manure plan which we have just considered. 3. The system of thorough tillage through the entire rotation. This last system is the one that has, within the past twenty-five years, superseded summer-fallowing in England. In place of the summer-fallow a root-crop is grown, the ground being heavily manured for the roots; these are then fed off with sheep and afterwards the land is plowed and sowed to wheat. Under this last system the English wheat crop has increased from an average yield of fourteen bushels per acre one hundred years ago to nearly thirty bushels, the present average of English farms.

Whether the yield of Kansas farms is to be increased or even maintained depends largely upon her farmers. To "cultivate well not much" is an adage that our farmers must know practically if they would prevent their fields from reaching the condition in which profitable tillage is impossible.—[Prof. E. M. Shelton.

THE INDUSTRIALIST.

SATURDAY, JUNE 17, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:15 A. M., and 2:25 P. M.
Going West.....	8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Frank Kehoe is in Chicago.

Mrs. Jaquith's husband has returned from Arkansas.

Prof. Kedzie is in the western part of the State this week.

Miss Lettie Burroughs and her parents are in Dallas, Texas.

The boys on the College farm are harvesting the timothy and alfalfa this week.

A new guitar and an instruction book for sale. Price \$20. Inquire at this office.

The citizens of Manhattan expect to have a glorious good time on the Fourth.

General Davidson has returned from Louisville, Kentucky, to which place he was ordered some time since.

The plasterers have begun work in the mechanical building, so we are in the dirt again and not at all good-natured.

Prof. Lee has returned to his charge in Ohio. He preached his farewell sermon in the Episcopal Church last Sabbath.

Wheat is ripening very slowly, owing to the wet weather. However, we understand some of our farmers intend to begin harvest next week.

John King and M. F. Leasure are going out to some of those western counties that are covered with wheat fields, for the purpose of making a "stake" during harvest time.

Rev. A. J. White, who graduated at this Institution in 1874, has just returned from Kentucky where he has been attending a theological school. He expects to spend the vacation here and then return to his studies.

Two storm-houses have been added to the College building, one at each end. These, besides being convenient and useful for other purposes, will prevent the wind and dust from sweeping into the building every time the large hall doors are opened.

But little progress has been made this week with the work on the new buildings. It has rained almost constantly every day, and while we feel thankful for the rain, which was much needed, yet we feel as much like complaining this week as we did last, for then it was wind and dust all the time and now it is rain and mud ditto.

Junction City is preparing for a grand celebration on the Fourth. Every effort is being put forth by her enterprising citizens to make it a success. We have received an invitation, printed in two colors and marked "Union," that is a neat job and reflects credit upon the Union office, which turns out none but first-class work. If this programme is indicative of what the celebration will be, we predict for the Junctionites a glorious time.

A stone sidewalk is being laid down from Manhattan to the College. It starts in the city at the northeast corner of the square used for base-ball purposes, runs directly west to the fair grounds, thence north to the northeast corner of the wire fence a hundred yards west of Mrs. Jaquith's residence, thence west to the east side of the street separating Prof. Gale's residence from the College farm, and thence north to a point opposite the College gate.

Through the kindness of Mr. G. C. Wilder, the accommodating agent of the Kansas Pacific at this place, we have received a pamphlet entitled, "The Centennial Exhibition and the Pennsylvania Railroad." It is a valuable little book, replete with desirable information, and presenting numerous maps and engravings which show the Centennial buildings and some of the magnificent scenery along the line of this great railroad. It is distributed gratuitously, and may be had at any of the principal railroad stations in the United States.

We have received the *INDUSTRIALIST*, a bright, newsy little paper published by the Printing Department of the State Agricultural College, at Manhattan, Riley county. It is printed well, and very ably edited.—[Lyndon Times.]

The Saline Valley Register thinks the Manhattan Enterprise is "the best looking paper Manhattan ever had." Does the Register exchange with the *INDUSTRIALIST*? If it does, and still persists in such a statement, we shall expect to hear from the same source that the Blue Rapids Times is a model of typographical beauty, or that the publisher of the Hanover Independent is not a "blacksmith," or some other palpable absurdity.—[Blue Rapids Lantern.]

Dr. Patee.

20-tf

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CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
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THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JUNE 24, 1876.

No: 10.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
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Daniel Webster.

[An oration delivered by Marion F. Leisure, of the Webster Literary Society, at the Under-Graduates' Exhibition of the Kansas State Agricultural College, Tuesday evening, May 16th, 1876.]

It is natural for Americans to reflect upon the history of our great statesmen with feelings of patriotism and pride. When we consider the destructive wars through which we have triumphantly passed, when we consider the fierce ordeals to which we have been subjected during the first century of our national existence, we find that it was during these critical moments that such men as Daniel Webster, Abraham Lincoln, Benjamin Franklin and others came forward to battle for our national interests and our personal welfare. When the most powerful nations of Europe were marshaling armies to invade our shores, when every surrounding people seemed to be regarding us with an evil eye, when domestic dissensions were rapidly increasing, up sprang the mighty mind of Webster to avert those evils. Well may the Americans esteem such a man.

Daniel Webster was not one of those men who are so fortunate as to enjoy a peaceful and quiet life, but he was compelled to build his reputation during some of our most terrible political struggles. He entered upon his career when party spirit ran high. Having inherited from his father the principles of the federal party, his sympathies were with it during the administration of Jefferson and Adams. At this time the decree of the French government and the decision in council in England had swept the commerce of the United States from the seas. Amid these complications with foreign powers, the mind of Webster was equal to the task of providing or proposing ways and means for meeting every obstacle that presented itself. It was owing to the result of his vigorous efforts that the war of 1812 was waged with such earnestness and success upon the ocean. By placing the finances of the country on a firm basis, he maintained our public credit and enhanced our national wealth.

Of such importance were Webster's plans and with such sound judgment did he execute them, that, although at this time a very young man, they gained for him the reputation indicated by the well-known remark that the North had not his equal nor the South his superior. But differing from some of our politicians of the present day, he never permitted himself, in spite of the most intense party virulence, to be infected with its contagion. His opinions were boldly expressed and firmly maintained, but without personal resentment

towards his opponents. He cultivated friendly relations with those who differed from him as well as with his colleagues, and by this means he gained the respect and admiration of all. It is to this quality of his character that he owes so much of his political success. After the war of 1812 the general pacification of Europe disposed for a time of the old controversies. But this gave rise to a new state of things in America. New interests were created at home; new questions were brought forward to be solved. The finances of the country had been greatly deranged by the expenditures of the war; the West was rapidly settling up; home manufactures were found too important to be sacrificed to foreign competition. The success of our navy against Algiers in 1816 showed the impolicy of reducing it. All these vital interests called forth the highest efforts of patriotic statesmanship. These formidable objects were met and removed by the powerful intellect and logical reasoning of Daniel Webster.

But it is likely that the instance in which Webster signalized himself most as a great statesman was in his famous debate upon Foot's resolution. This resolution, though at first relating to the survey of the public lands, finally led to a partisan warfare relating principally to the doctrine of the school of Calhoun, or the right of individual States to nullify an act of Congress. Mr. Webster's second speech upon this question is probably the most celebrated of any ever delivered in Congress. And if ever there was a period in American history when resolute and sound statesmanship was required, it was then, when some of our ablest men were advocating the principle of State's rights and endeavoring to disperse our glorious union. But, thanks to the Great Dispenser of human events, we had the indomitable Webster at the helm to safely pilot the old ship of state through the angry breakers and to safely land us at last where we now exultingly stand.

Not only as a statesman did Webster distinguish himself, but as a counselor and an advocate he took a position in this country to which no one has ever arisen. It was by his efforts in the celebrated case of Dartmouth College, one arising in his native State and concerning the institution where he was educated, that his reputation as a lawyer was established. When the State Legislature passed a law altering the charter of Dartmouth College, it was shown by Mr. Webster that colleges, unless otherwise specifically constituted, were private eleemosynary corporations so long as they were conducted in accordance with their charters. And in the second place, he proved that the charter of that institution was a contract within the meaning of the Constitution of the United States which the Legislature of a State was not competent to annul. With such clearness and vigor was the argument conducted throughout that the opinion of the Court was pronounced in favor of the old college charter. Since that time our chartered colleges and universities have stood upon the basis of right and justice, hold-

ing their property in a like manner as individuals, not subject to the control of or interferences by Legislatures. That such is now admitted to be the law of the land under the Constitution of the United States is owing in no small degree to the ability with which the Dartmouth College case was argued by Mr. Webster. This victory placed him with Emmett, Pickney and Wirt, in the front ranks at the American bar; and, though considerably the youngest of the group, on an equality with the most distinguished of them.

We do not wish to present Daniel Webster as a faultless man, but we have the slightest cause for drawing from the past the infirmities of his character. Humanly estimated, they were far less than his virtues. His religious character and impression gave him a moral dignity above all mere intellectual rank. We have the testimony of those who shared with him the innocent and manly amusements of youth; who walked with him at twilight upon the shores of the far resounding sea; who beheld him in the forum and in the senate-chamber, his gigantic intellect towering above all his compeers; and such witnesses assert that he never under any circumstances or on any occasion forgot his dignity or ceased to impress if not overwhelm with the sense of his superior greatness. As a reward for all his labor he is yet beloved and praised by every American. We all admire his noble career, and the illustrious name of Webster will remain fresh in the mind of every freeman when those of kings and princes have been forgotten.

Dr. Hall says: "One of the happiest and most independent of all human occupations is that of an intelligent farmer whose land is paid for, and who keeps out of debt."

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The Iola Register says: Farmers who have alfalfa growing report that it is doing well. Every one who has experimented with it is convinced that it will prove very profitable to the farmers of this State.

Mr. T. C. Henry, the Kansas wheat king, figures it out and says a man can take raw prairie land, hire it broken and sown to wheat, and with an average yield realize a profit of 156 per cent, on his investment.

The silk manufactured in Kansas in 1875 was valued at \$7,000. It is estimated that this year's product will reach \$20,000. The manufacture of silk promises to become, ere long, an important item in the industries of Kansas.

The Spirit of Kansas says: Mr. Wm. Roe, of Vineland, recently sheared two yearling Cotswold bucks, the fleece from one weighing twenty-one, and the other twenty-one and one-half pounds. The sheep weigh nearly two hundred and forty pounds each.

THE INDUSTRIALIST.

SATURDAY, JUNE 24, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

WE have just returned from a very pleasant visit to the famous stock farm, Durham Park, Marion county, Kansas, and are prepared to make affidavit that the half has not been told concerning the magnificent herd of Shorthorns that graces the meadows of Durham Park. When we say that this farm consists of something like 10,000 acres, of which 5,000 acres are under fence, and that the herd of pure bred Shorthorns numbers not less than two hundred head, many of which are of the best breeding, some idea may be had of the magnitude of the operations of the Messrs. Crane. Mr. Reed, the Superintendent, informs us that the sales of breeding animals are beyond their most sanguine expectations, they literally selling bulls and heifers by the car load, and at good prices. Among the probabilities of the near future is a pure Duke bull for Durham Park, a fact which breeders will bear in mind. It is this sort of aristocracy that Kansas needs, and we have no hesitation in saying that a Duke of Airdrie or Geneva is worth more to the State than half a dozen biped Dukes with their big pocket-books and seven-jointed names thrown in. We regret exceedingly to learn that Mr. Reed has decided to leave the Park at an early day and go into business for himself, a regret which we know will be shared by every one at all interested in the improvement of live stock in our State.—[Prof. E. M. Shelton.]

Editorial Correspondence.

Valley of the Solomon.

OSBORNE CITY, Ks., June 18, 1876.

We can conceive of nothing better calculated to increase a Kansan's respect for the vast extent and varied resources of his own State, than to accept the time-worn advice of the Chappaqua sage and "go West." After a ride of three or four hundred miles across prairie and bottom land, one begins to realize something of the immense producing power of this western Kansas, and of how important a position it is destined to ultimately hold in the State's economy. Its resources are as yet to be sure but partially developed, but they are each day becoming more completely so, and the balance of commercial power in Kansas is undoubtedly moving west.

Of this entire region none has impressed me as more beautiful or attractive than this magnificent valley of the Solomon River, including both its North and South Forks. Without any exaggeration it can be styled one of the very finest farming and stock regions not only of Kansas but of the entire West. Its fame has already been sounded

throughout the East, but to appreciate its beauties one should seat himself, as did your correspondent, beside the driver upon the top of the primitive stage-coach and thus make the tour of the valley itself. There are many things to be seen characteristic of frontier life on the prairies, which to eastern eyes have the savor of novelty. Villages of the social prairie-dog are occasionally encountered, where the proprietor of each little "dug out" dispenses heterogeneous hospitality to the rattlesnake and prairie owl. Herds of antelope are no rarity, and the bleached bones of an occasional skeleton mark the old stamping ground of the buffalo. This leafy month of June exhibits these prairie stretches at their prettiest. Upon the high divides several varieties of cactus are in full bloom, while on the bottom lands below, where the crisp buffalo grass is being driven out by the blue-joint, a perfect host of prairie flowers gives an exquisite color to the landscape.

Proceeding still farther down the forks of the river toward the main Solomon itself, you encounter a marvelously rich and well cultivated tract of country extending the full length of the valley to Solomon City. Some portions of this region, in its long stretches of fenceless prairie covered with immense fields of ripening grain, are almost identical in their general appearance to the magnificently cultivated plains of southern Germany, especially that portion near the city of Strassburg. The crops of this whole valley are thus far in fine condition, the productions promising to be far above the average, and in many portions harvesting has already begun.

California and Colorado stock-growers are also rapidly beginning to appreciate the advantages offered by this section for their purposes. Only the other day I passed two immense sheep ranches numbering four thousand and eight thousand head each, all in the finest possible condition, and other herds are being annually brought in. The advantages which promise to result from this enterprise need no comment here.

This entire valley of the Solomon is exceedingly well settled; neat, thrifty appearing farm-houses abound all along the route; and the towns and villages wear a stirring, business-like air. Osborne City, where I now write, is a flourishing little town of some two hundred people, the seat of the county. It was originally located in the spring of 1871, by a colony from Lancaster county, Pennsylvania, under the leadership of Col. Bear, since which time it has steadily progressed and improved socially and commercially, until it now affords a society of remarkable intelligence and refinement.

Our friend the Osborne County Farmer, under the efficient management of Mr. F.

A. Barnhart, is an exceedingly readable and ably conducted sheet, and is issued from a thoroughly well stocked and equipped office. Osborne county, though containing a population of only four thousand, is already indulging in the luxury of a murder trial, the present session of the District Court, now sitting before Judge Holt, being wholly devoted to the case of Henrietta Cook, who stands accused of the murder of her husband by the administration of strychnine. Through the courtesy of County Treasurer R. R. Hays, I was driven upon the high divide some three miles north of the city, where a fine panoramic view of the valley of both the North and South Forks, with their dark belts of heavy timber, is afforded at one time. Nothing finer than this view can be found in the State.

Proceeding onward down the main valley of the river we first pass through Cawker City, where is found the famous Great Spirit Spring of which I shall have more to say at another time; then through Beloit, the stirring county seat of Mitchell county; then diagonally through Ottawa county and Minneapolis, its county seat, to Solomon City, where the river loses itself in the turbid waters of the Smoky Hill. To lovers of this peaceful and substantial beauty in natural scenery, I can commend this valley as perfection in its way. Those who are looking westward for homes for themselves and theirs, need not be told that the inducements afforded to settlers through this entire region are second to none in the great West.—[Prof. W. K. Kedzie.]

National Agricultural Congress.

THE Fifth Annual Meeting of the National Agricultural Congress will be held at Philadelphia, September 12-14, 1876. The Annual Address of the President, Hon. W. C. Flagg, of Illinois, will give a review of our agricultural progress during the century, and attention will be given to "The Centennial Idea" in other addresses. Thus the growth and present condition of leading agricultural interests, as Grain, Cotton, Stock, and the Dairy will be presented. Agricultural Education, Transportation and Commerce in their relations to Agriculture; Organization among Farmers and kindred topics will be discussed by L. F. Allen, Joseph Harris, X. A. Willard and others.

The full programme will soon be issued. For any special information, the President may be addressed at Mora, Ill., or the Secretary, G. E. Morrow, at State Agricultural College, Ames, Iowa.

TORONTO, June 14.—The sale of Short-horn cattle here to-day was well attended. There were fifty-four head sold, and fair prices realized. The highest figure was \$23,600 for Airdrie Duchess III. The next highest price was \$21,000 for Airdrie Duchess II. Both were purchased by Albert Crane, of Durham Park, Kansas. Several animals were bought for Lord Feversham and other gentlemen in England.—[New York Tribune.]

THE INDUSTRIALIST.

SATURDAY, JUNE 24, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:45 A. M.
Going West..... 3:47 P. M.

FREIGHT ARRIVES.

Going East..... 12:15 A. M., and 2:25 P. M.
Going West..... 8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Thursday was the warmest day of the season; 93° in the shade.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

Wheat harvest upon the College farm begins to-day. The crop is very good.

A new guitar and an instruction book for sale. Price \$20. Inquire at this office.

A postal from Prof. Ward, now at Hamilton, N. Y., informs us that he and his wife are having a fine time, but that he wants the INDUSTRIALIST. Sensible.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

The College barn is full of the most delightful of odors, that of new mown hay; but what is better it is well-nigh full of hay, and the genuine article—timothy and alfalfa.

George Wake and J. W. Rambo crossed the threshold of our office Thursday afternoon, and interviewed us for a short time. Glad to have the students remember us thusly when on the Hill. Come again, gentlemen.

H. S. Maynard, J. C. Proctor, M. F. Leisure, J. E. Williamson, and S. C. Shuemaker, intend visiting the Centennial this summer. We trust that all the students who can will do likewise, for it will be almost equal to a trip around the world.

We have just harvested ten and one-half tons of super-excellent timothy hay from nine acres of land. This is not a large yield, but it must be remembered that the seed for this crop was sown only one year ago, and then only partly with timothy seed.

C. S. Buell, a young gentleman from New York, is now at work upon the College farm, and expects to enter the College next term. Mr. Buell seems to be an intelligent and sensible young man, and we bespeak for him a hearty reception into College ranks.

G. C. Brackett, of Lawrence, has presented Prof. Gale with a large box of as fine cherries as we ever saw. Mr. Brackett's trees yielded well this year, but a great many of the finest cherries were burst open and destroyed by the hard rains which came upon them about the time they were ripe.

While the thunder shower was in progress about half past eight o'clock Wednesday morning, the telegraph wire became intensely charged. Powerful discharges with the noise of a young cannon took place both in the post-office and in the K. P. depot. Mr. Robinson, the operator, received a very severe shock.

W. D. Gilbert, Esq., of Atchison, visited us Thursday. Mr. Gilbert is devoting himself to law and will achieve prominence in his profession.—[Valley Falls New Era.]

W. D. was an earnest student and in every way a gentleman while connected with this College, and the old students will be pleased to read the above evidence of his prosperity.

The weather has been exceedingly favorable for the work on the buildings this week, and great progress has been made. Mr. Winne has been pushing the work on the laboratory at railroad

speed. The walls of the west wing are completed, and the carpenters are now engaged on that part of the building. The cellar of the horticultural building is not yet completed.

Everybody asks what makes the corn growing on the top of the hill in field No. 7, so much taller and ranker than that growing in the lower parts of the same field. Two years ago this part of the field was manured at the rate of twenty-five loads of barn-yard manure per acre, and it now looks as though the increased yield of the present crop would more than pay for the outlay.

A dispatch has just been received from Osborne City stating that the trial of Henrietta Cook, for the murder of her husband, in which Prof. W. K. Kedzie was employed as chemical expert on the part of the State, has been concluded. After an absence of only three hours the jury returned a verdict of murder in the first degree. The closing scene in the court-room is said to have been exceedingly solemn and impressive.

From a letter, dated June 18th, received from J. F. LaTourette, Fort Lyon, Colorado, we take the following:

"It is very pleasant to be home once more among my old friends. It was quite a change, coming from Kansas where the fields and prairies were looking so green and the crops were growing so finely to Colorado where everything shows the need of rain. The grass is very poor and dried up, and even the grasshoppers look thin and lank. In consequence of the poor grass, the sheep and cattle are not doing well. This winter will be a very hard one on cattle. I have not seen a garden, corn field or wheat field since my return. Every one has been afraid of the grasshoppers which are very thick now. I would not be surprised if I found myself back in Manhattan this coming Fall. Am always glad to receive the INDUSTRIALIST."

S. C. Shuemaker, of Wetmore, Nemaha Co., has written us one of his spicy letters, which we consider too good to publish entire. He says that shortly after his return from College he donned a farmer's suit and went to building fence, but he has now resumed his old place in the store of Morris & Wolsey, dealers in General Merchandise, where he has nothing to do but "sell and tie up dress goods for the young ladies, which I deem a pleasure." Just like S. C., he has a faculty for "waiting on" the ladies. Of the crops he says, "Small grain looks well; corn rather backward on account of late planting and heavy rains. Has been quite wet here." Shuemaker shares in common with other of the students that longing desire for the INDUSTRIALIST, for which he sends the "wherewith."

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder
Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

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Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

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Gardening for Profit!—Instruction and Drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening. Kansas Forest Culture a specialty. Seventy acres devoted to experimental apple, pear and peach Orchards, Vineyards, Nursery, and Gardens.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects inimical to the Kansas Farmer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

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School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

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Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Blade, TOPEKA. Daily, \$3.00 a year; weekly, 50 cents. The only positively independent paper in Kansas. 4-1m

Herald, Hiawatha. Official paper of city and county. Terms, \$2.00 per year. Burger & Roberts, Proprietors. 6-1m

Patriot, ATCHISON. Established in 1867. The only Democratic daily in Kansas. Park & Vandegrift, Proprietors. 4-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

Lantern, Blue Rapids. A 16-column paper, set in nonpareil. No patent outside. \$1.00 a year. Frank Hall, Publisher. 6-1m

Plaindealer, Garnett. Devoted to the interests of Anderson county and Kansas. Republican. S. H. Dodge, Publisher. 6-1m

Courier, WINFIELD. Republican; weekly. Official county paper. No more subscribers needed. E. C. Manning, Publisher. 4-1m

Independent, McPherson. Independent Republican in politics. \$2.00 per year. Geo. McClintick, Editor and Proprietor. 6-1m

Sentinel, LAWRENCE. The only temperance paper in the West. Published weekly; terms, \$2 per year. D. C. Beach, Publisher. 3-1m

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

Courant, Howard City. All questions regarding Elk county or southern Kansas cheerfully answered. Address, Courant. 6-1m

Journal, OSAGE MISSION. C. H. Howard, editor. Published every Wednesday at Osage Mission, Neosho county, at \$2 per annum. 3-1m

Diamond, JEWELL CITY. Keeps its readers posted in regard to the splendid county of Jewell. \$1.50 per year. M. Winsor, Pub. 2-1m

News, MARYSVILLE. A 28-column paper; \$2.00 per year. Only paper at county seat, and devoted to local affairs. T. Hughes, Editor.

Sentinel, Minneapolis. A weekly, independent, Republican paper, printed and published by Hoyt & Midgley. Circulation in county, 500.

Appeal, LEAVENWORTH. Independent Democratic. Published daily, except Sunday. \$5.00 a year. W. W. Embry, Editor and Proprietor. 4-1m

Free Press, OSAGE CITY. Largest paper in Kansas. Published in the great central coal region of Kansas. W. H. Morgan, Editor and Proprietor. 4-1m

Republican, Baxter Springs. Politically, Republican; morally, Christian; financially, gold basis. Weekly. A. J. R. Smith, Editor and Proprietor. 6-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. W. D. Jenkins, Editor. 10-1m

Citizen, Fredonia. Established 1870. Circulation 828 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Union, JUNCTION CITY. Thirty-two columns. Fifteen years under one management. Brevity, Variety, Spice, Fearlessness, and an enthusiastic, vigorous and enterprising devotion to the best interests of the people (and especially our own) characterize it. Geo. W. Martin, editor and proprietor. 3-1m

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Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Gifford & Winter. 6-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

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Times, CHANUTE. A. L. Rivers, Editor and Proprietor. Published at Chanute, Neosho Co., Kansas, the crossing point of the L. L. & G. and M. K. & T. railroads. 4-1m

Blade, WAMEGO. Don't read this until you send for a sample copy of the Blade, the leading local paper of Pottawatomie county. R. Cunningham & Co., Publishers. 6-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkinson, Editor and Proprietor. 9-1m

Mirror, MINNEAPOLIS. A monthly land journal devoted to the interests of the Solomon Valley. Subscription, 25 cents. Sample copies free. C. C. Olney, Editor. 4-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. J. M. Cavaness, Editor. 6-1m

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Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will. D. Jenkins, Editor and Proprietor. 8-1m

Enterprise, MANHATTAN. A lively, wide-awake, local newspaper. \$1.00 a year. Subscribe if you want to keep posted on everything transpiring. Patee & Runyan, Publishers. 6-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

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Journal, La Cygne. Saturdays. Republican. 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

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To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

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Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

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No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JULY 1, 1876.

No. 11.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Moral Courage.

[An Essay read by Miss Ella M. Winne, of the Diagnothean Literary Society, at the Under-Graduates' Exhibition of the Kansas State Agricultural College, Tuesday evening, May 16th, 1876.]

With what thrilling interest we read of the heroes of the battle field. We love to hear our grandfathers tell the stories of war; of the brave ones that conquered and the cowards that fled. We listen until the brain is fairly dizzy and think how noble they were, and yet are thankful that our time is one of peace. We never tire of reading of the bold and daring deeds of the old Roman heroes. How we praise and admire brave Horatius when he spake to the consul, for to every man upon this earth death cometh soon or late, and how can man die better than facing fearful odds for the ashes of his fathers and the temples of his gods? He was not afraid of death and dared to stand at the head of the bridge, with two other volunteers, and face the whole Tuscan army. Yet, while we praise and admire this unselfish bravery of man, there is something in man's nature that if developed demands more than our admiration. It is a courage that the world greatly needs; the courage to speak the truth, to act the truth, to obey our Creator, and to follow Christ our Saviour. It requires brave hearts to fight under the banner inscribed with these principles. It is not a whitewash that the morals of society need; not an outward application to cover up the stains and flaws, but a complete renovation. The shot and shell of the battle field cannot give this virtue to a nation. Nor are we in need of precept, for there have ever been men whose mental faculties have flooded the world with precept, while many of them had not the moral courage to give us the practical result of their theories. We hear fathers saying, "Oh, practice the precepts I taught you in youth," while perhaps they themselves are carrying out anything but those precepts.

It is not the wealth nor its royal crown that gives prominence and character to a nation. What would make the memory of ancient Rome and Greece lasting were it not for the strains of their poets, the eloquence of Cicero, the thunders of Demosthenes, and the instructions of the renowned philosophers of Athens? The picture of England and France on history's page would be a fair one were it not for their ignorant monarchs and ambitious warriors. What relieves the dark picture? Is it not the deeds of such men as Milton, LaPlace and Newton? They are remembered for the good they have done. By the cultivation and right use of their talents they reared to

themselves monuments that defy the elements of time. These men were not reared in luxury, but, as have nearly all great minds and true benefactors, they came from the lowly walks of life. It is the moral virtue, the acts of benevolence, kindness to other nations, a lively interest in the production of literature, art and science, that give prominence and stability to a nation.

America can justly be proud to tell the story of such men as her discoverer and the founders of her liberty. Men wise in their own conceit laughed at the idea conceived by Columbus that the world was round. In fact they pronounced him a fit subject for an insane asylum. How many modern enthusiastic discoverers and inventors have been pronounced crazy by a disgusted people. The mere idea that a forty-eight hour's journey was going to take us across the continent was absurd and no sensible man would harbor the idea for a moment. Yet to-day we travel the distance in this time and with as much ease as we would take seated in our own parlors. Columbus worked on with a firm and resolute will to prove to the world that his conceived ideas were not false; and it was not long until their words of contempt were turned into applause, while some were even jealous of the man so short a time ago pronounced crazy. They did not at that time appreciate the great discovery, for they knew as little of the new land as they did of heaven. But at last they want a place of refuge, and they launch out to try their fortunes in a new continent. Then it became necessary that the government of our infant country should be taken out of the hands of one man and given to an intelligent people. Thanks to God, there were men who had the courage to "pledge their lives, their fortunes and their sacred honor," to declare themselves free from a law that took from them the right to execute the inherent principle of freedom in man. It is the character and deeds of such men as Washington, Franklin, Jefferson and Lincoln who give our young republic its stability and firmness. "Lovers of our race whose labors gave their names a memory that defies the grave."

In our country at the present day there are scores of things to tempt a young man to be hypocritical, to induce him to don a false morality. He is anxious to gain wealth, he finds it is not so easily obtained by honest means and he accepts the first channel to riches though it bring him naught but ill-gotten gains. He wishes to win applause and perhaps office, and seeks a more ready way by making a smooth exterior and counseling within how he shall deceive. Pride may look for a reward that only truth can merit. A falsehood either spoken or acted cannot long pass for truth, and this guise of morality will surely fail in the hour of temptation. Weak structures built upon this false foundation will tremble and fall before the tempter as the house built upon the sand is laid low by the tempest. There is no record of human experience in the history of the world of trans-

gression without punishment. "What a man soweth that shall he also reap." If wild oats you sow, wild oats you must reap.

Alas! how many are reaping the bitter fruits of "only a glass of wine." How it did sparkle and how bright it did appear. Perhaps a fair hand held the dazzling cup. You forgot that under it all the poisonous serpent lay coiled; the temptation is too great and you yield. If you had but dashed the cup aside and exercised your God-given will, if you had but let the better nature in you struggle against the tempter, you would have conquered. You were afraid men would call you coward, while your own conscience condemned you in the very act. Now in your misery you curse the brightness of the poison cup; you curse the fair hand that gave it. Though it does not lessen your sin, yet justly you may curse the hand, though fair it was, that gave the first poison draught, and thus assisted the evil one to triumph. Though lily white the hand, and though it did sparkle with jewels, yet we cannot call it truly fair. It is not innocent, not pure, not virtuous, but impure and vile for the coil of the serpent has been there. "Tempt no man lest thou fall for it."

"Day by day with lurking smiles the weak to death are led;
With trusting steps they walk the tempting way,
Their blood be on the smiling tempter's head."

To many the law of morality may seem a task and burdensome. We must remember that it has an ever ready, pure reward for obedience, and if we will but yield to its authority we will find it a kind master and among our highest honors and blessings. Let passionate and weak human nature be governed by an enlightened conscience. Youth is the time when morality must be germinated. There in the genial, fruitful soil it will gather nourishment for future years. Like the sturdy oak that stands in the farmer's field, its roots reaching outward as far as its topmost branches reach into the air, there gathering nourishment from a never-failing reservoir, and its foliage flourishes, while that of the tree rooted among rocks withers and dies.

There are conditions upon which we may enjoy this present life. These are plainly revealed to our mental and moral natures by the all-wise Creator. If the conditions be complied with, this life may be made both useful and happy, for "life is what we make it." We cannot expect all our bright day dreams to be realized for sorrow is the common lot of man, but "E'en sorrow rightly understood may good not evil show." Let us walk while thus privileged in the path of innocence and virtue; in the shadow of the protecting arm of the being who is ready to help and willing to bless if we but walk in his ordinances blameless; remembering that the greatest man is he who yields not to temptation, who bears the burden of life cheerfully and who trusts in truth, virtue and God.

Now this column and page are full.

THE INDUSTRIALIST.

SATURDAY, JULY 1, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

About Plows and Plowing.

The plows in general use by the prairie farmer may be classified under two principal heads, namely, breaking plows and stirring plows. These two classes differ essentially, and not merely in form but in function. With the breaker the object sought is the complete inversion of the furrow-slice in a form as compact as possible, while with the stirring plow we expect not only to invert but to pulverize the soil. Neither of these plows will properly do the work of the other; the breaker will plow in the stubble field but it will not pulverize, and the stirring plow will break even the stiffest prairie sod, but it is used at the expense of indifferent work and a great waste of power.

What every farmer should strive for is the best of its kind, even though the first cost is double that of the second-class article. There is no more foolish policy than that pursued by many farmers who purchase implements whose sole recommendation is that they cost a few dollars less than the first-class article. It has been shown by repeated experiments, made both in England and America, that plows which differed only slightly as to cost, form and general appearance, varied over one-third in draft in doing the same kind and quantity of work. That is to say, two horses with the best plow will accomplish as much as three with the inferior implement. It requires no great effort of the imagination to see from this fact that the few dollars difference between the first cost of the second-class and the best implements, may make all the difference between profitable and unprofitable farming.

There has always been more or less strife between the advocates of the wheel and the swing plow, each contending that his favorite implement had the balance of advantages. Now the facts are these: The wheel plow when so adjusted that the wheel just touches the ground without bearing heavily upon it, and when working upon tolerably smooth land, costs the team less draft than the wheelless or swing plow under the same conditions; therefore, it must be regarded as the more perfect implement. The cause of the increased draft of the swing plow is understood when we remember that the plow is guided and held in position solely by the workman acting upon two long levers, and the slightest force applied upon these is multiplied many times in friction at the sole.

Farmers are generally quite critical as to the form of the mould-board, and manufacturers in obedience to the farmer's tastes have expended great ingenuity in devising

graceful forms for this part. So far as these improved forms accomplish better work they are valuable, but the claim usually made for such "improvements" is that they greatly lessen the draft of the plow. The fact is the form of the mould-board has but a very slight influence upon the draft of the plow. The experiments of Pusey & Morton, and of the New York State Agricultural Society, all agree in this. The draft of the different parts of the plow as given by Mr. Morton, in the Cyclopaedia of Agriculture, is as follows:

Coulter and shaft.....	55 per cent.
Sole and landside.....	35 per cent.
Mould-board.....	10 per cent.
Total,.....	100 per cent.

From this table it will be seen that the principal causes of draft in the plow are friction at the sole and the action of the coulter and share in cutting the furrow-slice. Consequently, for improvements in the plow looking towards lightening the draft of the implement, we must look to the form of the share and the landside rather than the mould-board.

Finally, in order to plow most profitably employ only teams and men of an active habit. "Friction is independent of velocity." The team that walks at the rate of four miles an hour draws no harder than another team which plods along at half this rate. This has been uncontestedly proved a score of times. The great cause of fatigue to the team, when the load is reasonable, is in overcoming a natural habit of body, and the more active the team the less will the plowing cost in time and money.—[Prof. E. M. Shelton.]

Influence of Height Upon Rain-fall.

With the frequent and abundant rain showers of this present season of '76, we doubt not many of our readers have enjoyed a fine opportunity of witnessing an interesting natural phenomenon in the remarkable influence which simple elevation above water level invariably exerts over the quantity of rain deposit at any one place. This is a problem which has long interested and to some degree puzzled our meteorological savants.

Attention was first called to the subject by observing the marked fluctuation in the quantity of water collected by a perfectly reliable rain-gauge, when placed first at the level of the ground and then at elevations of from one to fifty feet directly above it. At this latter elevation the quantity of rain collected by the gauge was found to be fully two-thirds less than that taken at the surface of the earth. The first attempt to explain this fact was upon the supposition that the rain drops, being colder than the lower stratum of warm air, would as they rush through condense more moisture upon their surfaces, increase in size and thus increase the total quantity of the fall. Now this

explanation is not only wholly inadequate to account for the greatly increased amount of rain at the surface, but it is quite as likely that in many cases the rain drops would actually diminish in size by evaporation as they pass through the warm stratum of air, a circumstance which would entirely neutralize the first result.

By careful study and experiment the true explanation has undoubtedly been found as follows: At considerable elevations above the surface of the earth, where the course of the wind is entirely unbroken by trees, buildings or other interrupting surfaces, the introduction of the rain-gauge would tend to produce small counter-currents and eddies, which would from necessity greatly diminish the quantity of water which it would receive. As the air current struck the side of the gauge it would rapidly glance up and slide over its surface, spreading out laterally and thus deposit the greater portion of the rain drops which it bears along outside of the gauge. This cause constantly in operation throughout the entire storm would be amply adequate to account for the small amount of water found in the gauge at this elevation as compared with the amount which it would collect at the surface of the ground.

It must not be supposed, however, that another very interesting fact connected with this subject is capable of quite so simple an explanation. It is a very common observation, particularly in this State, that where two rain-gauges but a short distance apart are placed upon the ground, but one upon a point of land at a considerable elevation above the other, the lower gauge will invariably collect the most rain. We have seen no more perfect illustration of this principle than in observing the quantities of rain-fall upon the plain upon which the city of Manhattan is situated as compared with that upon the surrounding bluffs and table-lands. Even at so short a distance and so moderate an elevation as that of College Hill the contrast is very striking. It is a matter of common experience that in riding out of the city after a shower, while the streets may be drenched and the gutters overflowing, yet upon arriving on the Hill the surface of the ground frequently appears to be but barely moistened. Comparisons of gauge records made by Sergeant McFarland upon the Hill with those made by the writer in the city show conclusively that in short, rapid showers the quantity falling in the city is almost invariably the greater of the two by a slight quantity, while in prolonged storms covering a large area of country the difference is hardly perceptible.

This is all plainly accounted for by another well-known meteorological principle, viz: that brief local storms constantly tend to travel with their centers on low valleys and water-courses; the surrounding uplands being thus frequently covered by the storm's outer edges only receive as a result a somewhat less deposit of rain. All these facts teach us the necessity of the exercise of great care and judgment in the location of our rain-gauges if we would arrive at any adequate conception of the laws which govern inland storms.—[Prof. Wm. K. Kedzie.]

THE INDUSTRIALIST.

SATURDAY, JULY 1, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:45 A. M.
Going West..... 3:47 P. M.

FREIGHT ARRIVES.

Going East..... 12:15 A. M., and 2:25 P. M.
Going West..... 8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, June 28th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	90°	75°	82.0	29.812	S-W 28	Clear
Friday.....	94	72	83.0	29.855	S 24	Clear
Saturday....	92	74	82.7	29.716	S 20	Fair
Sunday.....	92	73	82.2	29.582	S 26	Clear
Monday.....	91	71	81.2	29.671	S 20	Clear
Tuesday....	91	71	82.0	29.833	S 12	Hy Rn
Wednesday	74	64	69.5	30.062	N-W 12	Lt R'n

Rain-fall, 1.10.

HARRY F. McFARLAND,
Sergt Signal Service.

Will. Burnham is at work in the Enterprise office.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

A new guitar and an instruction book for sale. Price \$20. Inquire at this office.

Prof. Shelton started East this morning. He will probably be gone until the middle of August.

George Gale has come down from Milford, and is going "East" to spend the Fourth. Vienna is thirty miles from Manhattan.

The most frequent sound that greets our ears nowadays is the cry for "m-o-r-t," uttered by the masons at work upon the new building.

George Moses found five dollars near the mechanical building the other day. We don't see why we were not born lucky instead of handsome.

In a few weeks we expect to favor our readers with a local which will make glad the hearts of some who have an interest in the affairs of this Institution.

Mr. and Mrs. Wilder, A. J. Whitford and Father Lee visited us this week, and inspected the improvements that are being made around here this vacation.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

One of the workmen on the laboratory building had a horse run over and killed by the cars on Thursday. This is the second horse he has lost in this manner this year.

Buley and Griffin, the colored gentlemen who have associated themselves with Hod & Carrier, noticed a few weeks ago, are now said to be the only responsible men of that firm.

The stores in Manhattan will all be closed on the Fourth. There seems to be a desire on the part of farmers, merchants and all to devote next Tuesday to the celebration of the Centennial of our American Independence. This is as it should be.

A. T. Keables has been getting up a family carriage which for workmanship and finish will compare favorably with work done in any shop. If any one is in need of carriage work, he will do well to call on Mr. Keables, examine his stock, and patronize home industry.

The farmers have every reason to be encouraged at the present outlook for large crops of all kinds of grain. Wheat harvest is on hand and promises a good yield, while the corn, oats, barley and other crops are doing finely. The rain which we had on Wednesday will materially help them.

We call particular attention to the advertisement for School District Bonds in another column. District clerks and others interested in the matter will do well to make a note of this fact. All school districts having bonds to dispose of will insure the fulfillment of this offer only by applying immediately.

The sidewalk from Manhattan to the College is now graded, and the City Council has advertised for bids for furnishing the stone and putting it down. What a convenience this sidewalk will be in times of wet weather. Those who attended College last year can testify to the above from experience.

The post-office at Manhattan is soon to be moved one door west from the present place of business, in the building formerly used as a tailor shop. The floor of the building has been lowered to a level with the sidewalk, and improvements are being made which will facilitate the labors of Mr. Pillsbury, our accommodating and efficient postmaster.

Last Saturday we took a ride out to Capt. Fagley's farm, some seven miles southwest of Manhattan, where a public sale of horses, cattle, hogs, sheep and farming implements was to be held. Quite a number of farmers and others, from different parts of the county, were present to make purchases, and about four o'clock in the afternoon the sale was completed.

Mr. Winne has the jolliest set of hands at work upon the laboratory building that we ever knew. The harder they work the more fun they seem to have. Warm days, when the flies bother us and Ellsworth keeps crying for "copy," we go over and imbibe a little of the spirit of good will that exists there, and return determined to meet and preform life's duties manfully.

The masonry on the north and west wings of the laboratory building is completed, and if good weather prevails next week Mr. Winne will very nearly finish his work on that building. The rafters are in place on the west wing, and the carpenters are putting on the cornice. Mr. Rains has everything in readiness, and is only waiting for the masons to get through when he will put a force upon the building that will do the wood-work, inside and outside, on short notice.

Looking out of one of our west windows the other day we saw a house moving leisurely along towards our office. Upon inquiry we learned that Mr. Howard was moving the blacksmith shop from the Hill to a point fifty feet north of the mechanical building. The shop arrived here in the evening just after the workmen had suspended operations, and one of them, on resuming his labors in the morning, quietly remarked as follows: "Buildings on College Hill are like mushrooms; they grow up in a single night."

We made a visit to the old College building and vicinity Thursday morning. We found the College hands busy harvesting wheat, and took a seat under the first tree we came to and observed for a few moments the manner in which the boys gather in the golden sheaves. After satisfying ourselves that they were doing well, and abundantly able to get along without our assistance, we departed. Our next halt was made in a fine raspberry patch, where we fully tested this fruit and found it delicious, but we don't want Prof. Gale to know we were there. We took a good look at the old building, recalled the many happy seasons spent within its walls, the pleasant scenes witnessed near it, and then returned to our office pondering upon the great change which a few years have made on College Hill.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

Township Books, Poor Records, Estray Records, Poll Books, Official Records, furnished by the Kansas Publishing House, Topeka.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography, Household Chemistry. Special course in Chemistry for Post-Graduates. The Laboratories are fully furnished with the best philosophical apparatus and the largest assortment of chemical apparatus and reagents west of the Alleghenies, all of which is for the use of the students.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Eagle, Wichita City. Weekly; terms, \$2 per year. M. M. Murdock & Bro., Publishers.

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

Blade, TOPEKA. Daily, \$3.00 a year; weekly, 50 cents. The only positively independent paper in Kansas. 4-1m

Chronicle, Lyndon. Official county paper. Republican; \$2 a year. W. T. Chalfant, Editor and Proprietor. 11-1m

Herald, Hiawatha. Official paper of city and county. Terms, \$2.00 per year. Burger & Roberts, Proprietors. 6-1m

Patriot, ATCHISON. Established in 1867. The only Democratic daily in Kansas. Park & Vandegrift, Proprietors. 4-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

Lantern, Blue Rapids. A 16-column paper, set in nonpareil. No patent outside. \$1.00 a year. Frank Hall, Publisher. 6-1m

Plaindealer, Garnett. Devoted to the interests of Anderson county and Kansas. Republican. S. H. Dodge, Publisher. 6-1m

Independent, McPherson. Independent Republican in politics. \$2.00 per year. Geo. McClintick, Editor and Proprietor. 6-1m

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

Courant, Howard City. All questions regarding Elk county or southern Kansas cheerfully answered. Address, Courant. 6-1m

Sentinel, Minneapolis. A weekly, independent, Republican paper, printed and published by Hoyt & Midgley. Circulation in county, 500.

Free Press, OSAGE CITY. Largest paper in Kansas. Published in the great central coal region of Kansas. W. H. Morgan, Editor and Proprietor. 4-1m

Republican, Baxter Springs. Politically, Republican; morally, Christian; financially, gold basis. Weekly. A. J. R. Smith, Editor and Proprietor. 6-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. W. D. Jenkins, Editor. 10-1m

Tribune, Lawrence. Daily, \$8; weekly, \$1.50 per annum. Independent Republican. Established Oct. 15th, 1854. John Speer, Editor. Speer & Covel, Publishers. 11-1m

Citizen, Fredonia. Established 1870. Circulation 828 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Courant, COTTONWOOD FALLS. One of the best papers in southwestern Kansas. Subscription, \$2 a year. Its editors will attend to buying and selling real estate. Address Martin & Timmons, editors and proprietors. 11-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Gifford & Winter. 6-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

Leader, Cottonwood Falls. Official paper of city and county. The Leader is not a real estate paper. \$1.50 per year. W. A. Morgan, Editor and Proprietor. 8-1m

Times, CHANUTE. A. L. Rivers, Editor and Proprietor. Published at Chanute, Neosho Co., Kansas, the crossing point of the L. L. & G. and M. K. & T. railroads. 4-1m

Blade, WAMEGO. Don't read this until you send for a sample copy of the Blade, the leading local paper of Pottawatomie county. R. Cunningham & Co., Publishers. 6-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkinson, Editor and Proprietor. 9-1m

Mirror, MINNEAPOLIS. A monthly land journal devoted to the interests of the Solomon Valley. Subscription, 25 cents. Sample copies free. C. C. Olney, Editor. 4-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. J. M. Cavaness, Editor. 6-1m

Kansan, NEWTON. Published every Thursday. Two dollars per annum. Twenty-eight columns. Republican in politics. H. C. Ashbaugh, Editor and Proprietor. 4-1m

Independent, OSKALOOSA. Established in 1860. Is in a flourishing condition, with a steadily increasing circulation. Edited and published by J. W. and F. H. Roberts. 6-1m

Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will. D. Jenkins, Editor and Proprietor. 8-1m

Enterprise, MANHATTAN. A lively, wide-awake, local newspaper. \$1.00 a year. Subscribe if you want to keep posted on everything transpiring. Patee & Runyan, Publishers. 6-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

Dispatch, Hiawatha. In its seventh year. Official paper; organ of the staunch old Republican party. Thoroughly established; home print. \$2 a year. A. N. Ruley, Publisher and Proprietor. 8-1m

Gazette, Enterprise. A 40-column quarto. Independent Republican. Devoted to the financial interests of the publisher and the general good of the people. V. P. Wilson, Editor and Proprietor. 10-1m

Times, BLUE RAPIDS. Twenty-eight columns. Published at the principal manufacturing town of the State. Only home publication in Marshall county. Terms, \$2.00 a year. C. E. Tibbetts, Proprietor. 4-1m

Journal, La Cygne. Saturdays. Republican. 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

KANSAS STATE AGRICULTURAL COLLEGE.

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FACULTY.

J. A. ANDERSON, Pres. and Prof. Polit'l Economy.
M. L. WARD, Prof. Mathematics.
J. S. WHITMAN, Prof. Botany, Entom., and Geol'gy.
WM. K. KEDZIE, Prof. Chemistry and Physics.
E. M. SHELTON, Prof. Prac. Agricul., Sup't Farm.
E. GALE, Prof. Horticulture and Sup't of Nursery.
J. E. PLATT, Prof. Elem'y English, Mathematics.
A. TODD, Sup't Mechanical Department.
A. A. STEWART, Sup't Printing Department.
W. C. STEWART, Sup't Telegraph Department.
MRS. M. E. CRIPPS, Sup't Sewing Dept'.
MRS. M. L. WARD, Teacher of German and French.
MRS. H. V. WERDEN, Teacher of Inst'm'l Music.

THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JULY 8, 1876.

No. 12.

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Brains in Agriculture.

[An Oration delivered by George A. Gale, a member of the graduating class of the Kansas State Agricultural College, Wednesday evening, May 17th, 1876.]

We all reach a point at last when our vocation in life must be selected. Many questions press themselves upon our attention before we can decide what is best to do. Each should know whether this or that branch of business is suited to his taste. Have all prepared themselves for that calling which they can hope to make a success? These questions and many others must be carefully decided before we are ready to start in any direction. But in every case they are questions which should have been decided before our studies were selected, then that study could have been made to bear directly upon our calling. What would we think of a person, after pursuing a course in a literary institution, who would take up the practice of medicine without further preparation? And yet it is almost as absurd to think of becoming a successful agriculturist with a course of study which is as far from practical as the one at a literary institution. Why is it that the farmer who is carrying on that industry which lies at the very foundation of every other branch of business is so often looked down upon, regarded as having little ability and so being unable to do anything but follow the plow, and as unfitted to do the ordinary business of life? Why is it thus? Is it not because the mass of the farmers are not thoroughly prepared for their business?

We take the ground that in a large majority of cases the fault may be traced to the early training of the farmer. If the farmer is not as prosperous as other business men, we cannot lay the fault on the pursuit of agriculture; but may if we take the trouble, in nine cases out of ten, trace the reason to the prevailing idea that any one can farm. In very few cases have farmers made the necessary educational preparation for their work. Perhaps they have partially prepared themselves for some of the professions, and having tried one after another they are finally driven to the farm to sustain life. These are in many cases the persons who make our poor farmers, and it is certainly a strong point in favor of the charity and forbearance of the soil that they do not make an utter failure here as everywhere else. These persons will fail to see the pleasures and advantages of rural pursuits, for unaccustomed to farm life they soon look upon it as mere drudgery, and well they may for they are not qualified for the work. When the time comes that we

have more institutions that give a course of study that is as direct and practical for the farmer as the one given our lawyers or medical students, we may expect to see a great change in those engaged in agriculture. As our farmers become more thoroughly acquainted with the principles that underlie their business, they will not only respect themselves but be respected by others.

There is certainly no more honorable pursuit than that of the farmer; his labors yield him unpurchased health and repose. There is as great an opportunity for advancement in matters of farming as in any other branch of business, and yet how seldom it is we find the farmer making them. In many cases the real labor-saving improvements are invented by men in other occupations. Farmers have not for some reason done much of this work for themselves. May not the cause of this lie in the fact that they as a class have not the proper training. We often hear it urged that if you give a boy an education you cannot make a farmer out of him. Past experience seems to prove this true, and why this seeming difficulty? Is it not because the average education afforded the farmer's son is not that which he will need in after life? In the main how little of the ordinary education hitherto given bears specially on the business of the farm. If you review the studies pursued in any of the literary institutions, and which constitutes the only basis of a farmer's education, you will find that they serve to qualify him for any other vocation than that of a farmer, and even in many cases help to make the farm and its pursuits distasteful to him. It is no wonder then, when you give your boy an education which leads him towards a profession, that he does not return to the quiet life of the field. You may mourn over it but the fault is not in the boy, it is in the system of education. You might as well make a farmer out of him if you give him the culture necessary for the farm.

There is as great a profit on brain work in agriculture as in any other pursuit, and the farmer's success depends upon the use of this intellect, and yet how few farmers we have who ever invent a new method of doing a piece of work. If a farmer has independence enough to break out from the paths trod by his father and grandfathers, he is made the laughing-stock of the entire community until he proves it to be a success; then they are ready to adopt his way, wonder why they didn't think of it, and possibly tell the inventor that they always thought just so.

It is frequently stated that the farmer is obliged to work more hours a day than any other class of business men. This is not true. Ask our leading merchants who have been successful how much time they spend in their business houses, and you will find that they spend more hours year in and year out than our farmers do in their work. Perhaps it may be urged that the merchant will make a greater fortune than the farmer, but when we consider the great risk that the

merchant is running, the wear and anxiety of his life, and also that in nine cases out of ten those who engage in mercantile pursuits fail in business, we claim that there is a heavy balance in favor of farm life.

Farmers as a class are sure of a competency. We are not to understand that this does not involve work, for without it he will be as sure to fail in this as in anything else. But the farmer must add to industry good judgment, if he would succeed. There is frequently a great lack of this in the general management of the farm, and as a result many only manage to live. What would we think of a man engaged in mercantile business if he would invest all his means in the erection of a large business house? He would certainly lack in judgment, yet how often do we see this very thing done in farming in various ways. The farmer will invest his all in securing a large tract of land or in putting up a large house, and here his farming must stop. This course is not uncommon. There is certainly a lack of judgment in all such cases. Good judgment would dictate less land, cheaper buildings if necessary, with more loose capital at command. We do not wish to say that the farmer should not put up as good buildings as other business men, but such only as he can afford. We say most emphatically that as soon as his homestead is paid for and he has money at his command, he should give more thought to the inside comforts of his home than is usually done. If you wish your sons to return to the farm, you must make your homes pleasant and comfortable and see to it that the social instincts of the family are cultivated. If every farmer would be careful about these small matters, as he may think them, the children would not be in such a hurry to leave the home. Farmers, remember that you were boys once and that you wanted a day now and then for pleasure excursions, such as gunning, boating or fishing. And above all, supply your families with reading, and encourage them to read only such books and papers as will store their minds with useful knowledge and serve to make them better men and women. In this way your homes will become more attractive than the streets, hotels and drinking saloons.

The judicious farmer is free from the cares and anxieties that so constantly burden other vocations. His time is his own; he can spend his evenings at home instead of being obliged, like the merchant and those engaged in the professions, to spend his evenings frequently until the small hours of morning in the counting-room or office. There is no business which is more attractive when rightly managed than that of farming. It has to every thoughtful mind a rich store of the purest enjoyments; it opens to our view the brightest visions of rural life. Who is there who does not admire a farm where everything is in order and reduced to a system, while the daily routine of labor moves like clock-work. We need not go far to see the opposite, where every-

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, JULY 8, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Use Your Eyes.

We can hardly give too much thought or time to the culture of our observing faculties. It is to be lamented that our old educational systems have to so large an extent ignored the very existence of these faculties. In the estimation of most people the great end was reached if man was only taught to think, no matter to what purpose he thought. The great practical lessons to be gathered from the outside world have been regarded as of little moment. The practical has never been held as taking an important place in education, and the work of turning out practical men has not been the business of educators. Hence, with the best education "which our country affords," our young men are often comparatively helpless. Out of this one-sided education has grown a feeling of contempt on the part of our practical men for our regular system of culture.

No doubt great injustice has been done in some cases to a time-honored system, for it is not possible to make good shingles out of sap wood. But we have reason to believe that for the active pursuits of life the regular system of education is not the best that can be offered. The sober judgment of business men is tending in this direction. Many men abundantly able are refusing to send their sons to college, because observation has taught them that as a preparation for business life the regular college course is not a success. They find that in a practical sense college students have failed to use their eyes. We often find men of no literary culture who really know more of the world, and what is required of men in the world, than the most apt scholars. Such men make the most of every thing they see. Not a day or an hour passes without giving to some men new ideas of life. They may know little of the schools but it cannot be justly said of them that they are uneducated. They may have no diploma and may be keenly alive to the deficiencies of their early culture, yet, in the active pursuits of life, we find them taking the lead and commanding the most lucrative and important positions.

Their culture has been that of the world's school. In the rush and jostle of business they have been educated for their work. Their perceptions have been quickened by the world's rough knocks. Their keenness comes from the attrition of every-day life. As a result they often out-strip in life's race their more cultivated neighbors. This is true often in the professions, but more especially is it true in the industrial pur-

suits. We have several cases in mind where this class of men are commanding first-class positions. This is not the result of accident. We cannot charge it up on the score of the world's ignorance, but has its origin, to a large degree at least, in the kind of culture given. Thus we find one man of very ordinary culture commanding for his services \$10,000 a year, while a brother of greater mental abilities and the most thorough collegiate culture must be content with a salary of \$2,000 or less. This is not an isolated case. Every city and every town in the country will give us marked examples of this same state of things. In the case here stated we have the two extremes of our educational system clearly contrasted in their results.

Much as we may deplore it we are forced to confess, sometimes, that educated men in the rough experiences of active life are thrown to the rear. We may theorize as much as we please over the æsthetic culture of the old system, and mourn that the man of letters is so often out-stripped in life's race, but the fact remains, and we must confess that there is either something wrong in the man or in the system of culture. It may be unjust to charge the fault entirely to either, but we are compelled to believe that the system of education has something to do with this state of things. We are inclined to believe that there is a golden mean which will give the advantages of the higher culture, and at the same time give that practical insight into the prevailing temper and directing powers of this active age which will better fit our young men and women to cope with the demands of the times.

To attain this end we must not only teach men how to think but how to see. While most men make some little use of their eyes, there are probably only a very small number who have learned to use them to the best advantage. Too many men see without learning anything. We must use our eyes; we need to form habits of close observation. This is nature's way of teaching. The child begins here, and all he needs is a little encouragement to lead him right on. But instead of this, in ninety-nine cases out of a hundred, his eyes are practically closed to the most important and really richest sources of culture. In too many cases the natural tendencies of the child are repressed and something unnatural and unpractical made to take its place. We are inclined to the belief that the early natural craving of the child to study the strange world with which it is surrounded should be encouraged, and habits of intelligent and persistent observation thoroughly established. Some of our best educators have felt this need, and have endeavored to lead their pupils in that direction.

A young man once said to that prince

of educators, Louis Agassiz, "What shall I study?" The Professor replied by handing the young man a fish and saying, "Study that." After he had studied the fish as long as in his own estimation it was desirable, he returned to the Professor and was again told to study the fish. The practical lesson contained in this incident is an important one. The same principle would have been involved had the fish been replaced by a shrub, a flower or an apple. The aim, doubtless, here was the culture of the observing faculties. How to train these faculties is really the great question. In subsequent papers we will point out some of the principles involved in learning to use our eyes.—[Prof. E. Gale.]

The Trees for Timber Culture.

As a rule it is safest to select those varieties of fruit trees for planting upon the open prairie which grow naturally in the immediate neighborhood. Many thousands of dollars have been wasted in planting exotic varieties. Repeated trials have been made to reproduce the forests peculiar to the eastern States, and always with doubtful success. The sooner we accept the fact that we have a climate essentially different from any of the eastern States, the better it will be for tree planters. The losses of 1874 and 1875 have taught us some important lessons. To profit by these should be our first purpose. Those varieties which have failed should be let alone; while new varieties, however well recommended, should be planted sparingly, if at all. In the neighborhood of Manhattan, and probably to the west of this point, it will be of little use to plant the chestnut, the beech, the sugar maple and the larch. While east and south of us the catalpa does well, so far it has proved only moderately successful here.

The ailanthus winter kills on our low grounds, while upon high, dry and gravelly ridges it gives promise of success. The tree is hardy in such situations, and if planted thickly will shade the ground and require little care after the first year. From the general habit of this tree, most people think the wood must be valueless; but it is hard, fine-grained and well fitted for many kinds of mechanical work. It is good for fuel, and for the first twelve or fifteen years grows with great rapidity, but more slowly after that period. Hence for planting on high and dry locations it may prove one of the most valuable of exotic trees, but it cannot be relied upon if planted in rich bottom lands.

We can rely upon the cottonwood, black walnut, ash, both green and white, some varieties of the willow, silver maple, box elder and osage orange. The red cedar does well and should be largely planted. While the osage orange does not make a very large tree, it has qualities which render it a very desirable tree to be planted for timber. It is perfectly suited to our climate. It transplants well when young. It will protect itself to a large degree from stock. The timber is justly regarded as among the most durable as well as the most valuable for many mechanical purposes. And lastly, the young plants can be obtained at less cost than those of any other desirable varieties. For timber claims there is probably no tree which will bring sooner or larger returns than the osage orange for the outlay made. While there are probably other varieties of trees that can be successfully cultivated, we shall find the above our chief reliance for many years to come.—[Prof. E. Gale.]

THE INDUSTRIALIST.

SATURDAY, JULY 8, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:45 A. M.
Going West..... 3:47 P. M.

FREIGHT ARRIVES.

Going East..... 12:15 A. M., and 2:25 P. M.
Going West..... 8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, July 5th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	65°	59°	71.7	29.959	N-E 12	Clear
Friday.....	79	60	73.7	29.770	S 12	Cloudy
Saturday....	75	63	69.0	29.689	S-W 30	Lt R'n
Sunday.....	85	61	76.5	29.695	S 12	Clear
Monday....	92	69	80.5	29.683	S 38	Fair
Tuesday....	90	73	82.0	29.760	S 36	Fair
Wednesday	89	68	80.2	29.755	S-W 12	Clear

Rain-fall, Saturday, July 1st, 1.50.

HARRY F. MC FARLAND,
Serg't Signal Service.

Wes. Gregory is studying law in Topeka.

We notice several new hands at work on the buildings this week.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

A new guitar and an instruction book for sale. Price \$20. Inquire at this office.

We have as good a prospect for corn on the College farm as any one can show. We never saw corn grow faster.

We know some parties who must have taken the whole instead of the $\frac{1}{4}$ of July. They are so patriotic that they are still celebrating.

George Wake has a position as baggage-master and night operator at the Kansas Pacific depot. Glad to have him prosper, for he is a good boy.

H. S. Maynard read the Declaration of Independence on the Fourth at Randolph, an act which "ye local" had the pleasure of performing at the celebration here.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

The College hands have about finished stacking the grain. They say it takes considerable more work to dispose of the crops this year than it has for the last two years. Yes, and from all parts of the State comes the same statement.

A variety of work has been done on the laboratory building this week. A large water tank has been placed in position in the west wing, the brick mason is building several chimneys, and the tinner is at work on the roof arranging gutters to carry off the water.

We call particular attention to the advertisement for School District Bonds in another column. District clerks and others interested in the matter will do well to make a note of this fact. All school districts having bonds to dispose of will insure the fulfillment of this offer only by applying immediately.

The masons are very nearly through work on the laboratory building. By this time next week they will have forsaken it entirely and begun their labors on the horticultural building. The carpenters are busily engaged on the laboratory building. Some are putting up rafters, some are putting on sheathing, and several are shingling.

For several reasons, the most prominent of which is the Fourth, we are late with our paper. We have changed quarters. Our office embraces what are known as the sewing and music rooms, from which the paper is issued this week. We expect, however, to be in our own room next week, and free from the dirt and confusion which has existed in these regions for some time past.

Inquiries regarding the next term of College are quite numerous, and the prospects are good for a larger attendance than ever. This has been a glorious year so far for farmers, and their prosperous condition will enable them to look after the higher education of their children. A. N. Godfrey will probably return and bring several from his county. Frank Landon also intends to grace these premises with his presence again.

L. E. Humphrey sends the following from Milford, Davis county:

"Crops here are very good; farmers are happy; rains are plenty. The hopes of most of the people here, except the herd law people, are bright; their countenances are expressive of much joy within. Many of the farmers here are carrying milk to the Bala cheese factory. We furnish milk for the factory from twenty-seven cows. The physiologist says this work is good to develop the muscle; my views fully coincide with his."

From Strawn, Coffey county, S. R. Hodges writes as follows:

"Times in this part are very prosperous. We are blest with good health, good weather, and a brilliant prospect for an abundant harvest of all kinds of cereals. The wheat crop is now generally in stack shape. The oat fields are but awaiting the clanking sickle, while farmers once more prepare for an increasing acreage of another wheat crop this fall. Mention has been made by some hereabouts of the intention of going the ensuing year to the Agricultural College."

The celebration of the Fourth at Manhattan passed off very pleasantly. It was not one of those grand hurrahs that some cities had, but a quiet yet patriotic affair, an earnest thanksgiving for the prosperity of a century. Early in the day teams rolled in from all directions, and by eleven o'clock there was a large concourse of people on the grounds, situated just across the Kansas River. The exercises were of the usual kind, varied only by the reading of a poem and a presentation of the history of Riley county from an early day. In the afternoon short speeches were made reviewing our past history as a nation, commenting upon the present, and prognosticating the future. Altogether it was a day which will live long in the memories of many.

Last night a party of four, among whom was this here'un, went up to Rocky Ford in a wagon, taking a boat along to return by water, for the purpose of robbing the peaceful Blue of the fish beneath its waves. Upon our arrival we walked out into the river, perched ourselves upon the rocks and there we sat like bumps on a log for four or five hours, catching in the meantime six of the aforesaid animals. We came to the conclusion that we were not intended for fishermen, and so entered our little bark and rowed for Manhattan, which landing we reached just as the sun was appearing in the eastern horizon. Although we did not seize any, it is the opinion of this here'un of the party, in his present sleepy condition, that we were all in(a)sane. Maybe(?) we'll go again.

The INDUSTRIALIST, published at the Agricultural College, Manhattan, and edited by the faculty, is one of the most welcome of our weekly visitors. It is always read and laid aside with a regret that there is not more of it. Price seventy-five cents a year.—[Osborne County Farmer.]

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

Township Books, Poor Records, Estray Records, Poll Books, Official Records, furnished by the Kansas Publishing House, Topeka.

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf GEO. W. MARTIN, Publisher.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan.

10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography, Household Chemistry. Special course in Chemistry for Post-Graduates. The Laboratories are fully furnished with the best philosophical apparatus and the largest assortment of chemical apparatus and reagents west of the Alleghanies, all of which is for the use of the students.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

Clothes.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan.

37-3m

[Concluded from first page.]

thing runs as if it were out of joint if it moves at all. When boys once leave such a farm they are loathe to return again. These men neither enjoy farming as a business nor do they make it a success. In the eyes of such a man farming is the poorest business man ever followed. He does not stop to seek for the real cause of his failure, but in order to clear himself of all blame he lays the fault on the business. The old adage, "If anything is worth doing at all it is worth doing well," applies to farming as well as to other branches of business.

One of the most desirable features of agriculture is the great influence which a suitable education will exert upon its attractiveness. It brings us into constant association with the workings of nature. The vegetable and animal kingdom are always before us; these we can study in the legitimate practice of our vocation, while those employed in the professions are almost entirely deprived of this privilege. We observe in all directions a growing disposition as a people to avoid agricultural pursuits and to rush into the already over-crowded professions. Labor is held to be degrading, and the handles of a plow are considered less dignified than the yard-stick. This state of things is tearing away the very foundation of our national prosperity, and unless checked by public opinion will sooner or later hurl us to ruin. It is upon agriculture that we must depend for our prosperity, and dark will be the day to this nation when this fact is ignored.

Believing that no other pursuit offers so sure a guarantee of an honest independence, we would turn to agriculture not only as our national hope but as our chosen life pursuit. Free from the cares of what have been termed the learned professions, the uncertainties and temptations of trade, we would seek to combine with the intelligent culture of the soil, that culture of the mind and heart which shall brighten the life that now is and strengthen the hope of that life which is to come.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Eagle, Wichita City. Weekly; terms, \$2 per year. M. M. Murdock & Bro., Publishers.

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

Chronicle, Lyndon. Official county paper. Republican; \$2 a year. W. T. Chalfant, Editor and Proprietor. 11-1m

Herald, Hiawatha. Official paper of city and county. Terms, \$2.00 per year. Burger & Roberts, Proprietors. 6-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

Lantern, Blue Rapids. A 16-column paper, set in nonpareil. No patent outside. \$1.00 a year. Frank Hall, Publisher. 6-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. W. D. Jenkins, Editor. 10-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

Leader, Cottonwood Falls. Official paper of city and county. The Leader is not a real estate paper. \$1.50 per year. W. A. Morgan, Editor and Proprietor. 8-1m

Tribune, Lawrence. Daily, \$8; weekly, \$1.50 per annum. Independent Republican. Established Oct. 15th, 1854. John Speer, Editor. Speer & Covel, Publishers. 11-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkinson, Editor and Proprietor. 9-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. J. M. Cavaness, Editor. 6-1m

Independent, OSKALOOSA. Established in 1860. Is in a flourishing condition, with a steadily increasing circulation. Edited and published by J. W. and F. H. Roberts. 6-1m

Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will. D. Jenkins, Editor and Proprietor. 8-1m

Enterprise, MANHATTAN. A lively, wide-awake, local newspaper. \$1.00 a year. Subscribe if you want to keep posted on everything transpiring. Patee & Runyan, Publishers. 6-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

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Dispatch, Hiawatha. In its seventh year. Official paper; organ of the staunch old Republican party. Thoroughly established; home print. \$2 a year. A. N. Ruley, Publisher and Proprietor. 8-1m

Gazette, Enterprise. A 40-column quarto. Independent Republican. Devoted to the financial interests of the publisher and the general good of the people. V. P. Wilson, Editor and Proprietor. 10-1m

Citizen, Fredonia. Established 1870. Circulation 828 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Journal, La Cygne. Saturdays. Republican. 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

KANSAS STATE AGRICULTURAL COLLEGE.

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CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JULY 15, 1876.

No. 13.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

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Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Our Lives.

[An Oration delivered by Miss Nellie Sawyer, a member of the graduating class of the Kansas State Agricultural College, Wednesday evening, May 17th, 1876.]

What our lives are to be in the great whirl of life is for each one of us to determine. We have each a problem to solve. We commence its statement with the first word we lisp, and see the result when we cross the dark river that bounds this little island we traverse, calling its crossing life and the steps we take the work of a life. What are we to do who are called women; who have a share in life's burdens very hard to bear, but which seems to others so easy it is often wondered why we complain in the least? In our schools we go through training which does very little toward giving us an equal footing with the many strong, hardy men who come into their life work with an armor almost impenetrable; or they have, like the hero of old, but the one weak spot where the fatal blow may be felt, and they can for the most part keep the heel out of sight.

But the woman comes into the fight unarmed; she comes into her life work with only her weak hands to aid her. But who shall say she is not doing her best? Is she not advancing in every way? Is she not coming in every sphere of life nearer her ideal of true womanliness? She has always been man's best gift. There is an old tradition that woman was first given to man's view in a tiny being not more than a span high; he was told that if he captured her before she grew larger than he she would be subject to his will, if not she would govern him. Of course he put forth every effort and at last caught the bright, beautiful being just before she reached his own stature. Ever since that time man has had a slave. But as nations advance woman's work takes a higher standard. Her place in the picture of life has been in the background, giving man the foreground and by her own charms helping to set off his best features. So it has been in everything. Her highest and best aims have been to help man in his journey onward and upward.

There was a time in the history of our race when, in the ancestral halls of "merrie England," there were noble lords feasting and carousing, now and then flinging a choice bit to the hungry dogs and making merry over the latest hunt. When the best and purest feelings of the lord were stirred, he would spring to his feet and in a frothing bumper of wine drink a toast to "My faire ladye." Their principal employment was hunting, and their best amusement the wandering Troubadour, who came

and for his supper sang stirring songs of love, or melted the stoutest hearts with soft, low tones of love. Rude and unlettered were those lords of Saxon race whose best aims in life were to make of themselves nobles in the sense of the times, which meant to be the best riders and hunters and the kindest masters to the miserable serfs who bowed low when their lords passed by. Yet even they had in their hearts a germ of true nobility which showed itself in the love and homage which they gave their lady-loves and their mothers.

In comparison with those times we live in a grand, glorious age. Our country has a much different idea of a life work. Woman is given a more equal chance with us than she had under the rule of the Saxon kings. Now she is allowed to a certain degree to choose what her life work is to be and to prepare for it. If she chooses the profession of medicine she is allowed to study it and make a physician of herself. And what can there be more fitting and proper than that woman, tender and gentle, should be permitted to heal the sick, to come with cool, soft hands and cheering words to the sick-room? It is her sphere if she has a taste for it. She is just as able to learn the art as any one, and no one really wishes to follow this study, for it is a study all the years of a life, unless he be fitted for it. It must be a God-given talent, and if that be a woman's life work she will do it in every respect to the best of her ability. If she wants to make mineralogy a speciality, why can't she? Certainly she can learn the composition of a mineral and the tests for proving it just as well as a man. And in the gems, those bright, glittering pieces of mother earth, which are to the heart of a woman a thing of beauty and a joy forever, her more delicate perceptions of beauty and quicker eye will single out a diamond by its first flash though it be surrounded by incrustations that have buried it perhaps for centuries.

In the great future that stretches itself before us, we see an advance in the sciences as well as in the fine arts. The arts have held almost undisputed sway as far as the generality of women are concerned, and they have been just touched upon by the majority of students. These have dipped their oars in the sea of painting, music or sculpture enough to find that there is deep water ahead, and then with a cry of alarm have rowed quickly back leaving the broad ocean uncrossed save by few. The sciences have not been troubled by such voyagers. Here and there one has come down to the water's brink and fearlessly entrusted herself to the dangers of a voyage. But far in the lives that are to be lived we may see a day coming, slowly but surely, when if we choose to embark on the voyage of either science or art we may be sure of a safe passage if we study our charts and keep to their teachings.

Our country has risen grandly, is rising still, and is there any danger of having, like Greece and Rome its fall? Is there any danger of going back to the ways of

our forefathers, or shall we go on as we are working now, adding here a thread and there a thread, growing more and more perfect, until at last we have a complete web which will be laid aside to be unrolled at the last day, when we shall see all the broken threads but shall have no chance to mend them? When God created man he gave him a mind having innumerable resources. These resources are being constantly developed. There are many ways in which a mind may work, but no two minds can work alike. So no two lives can be lived the same. Even we in our every-day life are constantly changing. We go one day in the straight path toward perfect happiness, but perhaps the next day finds us far from the path, wandering in broad fields where to stay is death. Time will tell where we will be found at the last. Life is so much if we choose to make much of it; but it may be very little if we do not work faithfully.

When we commence our education it is as though we were placed in a dense forest through which there was a path marked out. But it is obstructed by immense trees that must be removed, and matted by undergrowth that will entangle the feet. We have no tools given us but must make our implements as we go along. We have only a mind, we must teach it to grapple with the hard lessons which block our road to knowledge, and to rise above the petty cares that hang about our feet. None of us now have minds that are equal to the tasks which after years are to bring us. We must raise our intellect up to a standard where it will work out our hardest difficulties as they appear. We grow in mind and strength alike, and while we do the work given us now we are continually thinking of the future. We all plan for a time to come. We think of the to-morrow forgetting that to-day is one of the to-morrows for which we were waiting, and we almost forget that time is made up of to-morrows that are changed by a magic hand into to-day, and that when to-day has slipped by it has gone forever and with it golden opportunities for doing many little deeds, which, though small in themselves, would count nobly for us when the record is read and the books are closed.

Many find pleasures in the work of to-day, but what is there for others? When they have reached the years to which they have looked forward for so long a time they find apparently but a barren field from which all the wood has been taken, leaving only clay and sand in which nothing will grow save bitter herbs and poisonous weeds. There is no beauty or usefulness in the life to come, and all the loveliness is passed away from the time that is gone. To some life seems an immense blank; but not nearly all people find life so. With many it is really different. When they launch out into the seething, rushing flood of existence, they come surrounded by influences that will form a life-preserver which will carry them through the raging

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, JULY 15, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

How to See.

This is simple enough most persons will say at first sight, but the fact that all men do not learn to use their eyes to the best advantage is excuse enough for this article. And that other fact that the eye needs drill as well as the hand and the reasoning powers, should lead us to consider this subject well in connection with the education of our youth. In the use of our observing powers we find ourselves constantly dealing with forms, hence we must use the line. The young man who had a fish for his first lesson, whether he realized it or not, was dealing with lines. The line with him was really the unit of measure by which he

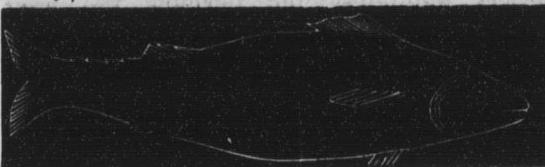


Figure 1.

reached his conclusions, and by which in his own mind that fish was made to differ from every other fish even of its own family. If we place a shrub, a flower or an apple in the student's hand he must use the line to determine its peculiar features. If we take the most simple object as that of a fish, as in Fig. 1, we shall see that the line holds the most intimate relation to its form. Or take this cup in Fig.



2 and we see that it is bounded by the line. Or if we examine several cups in succession,

Fig. 3, we find it is in every case the line which gives shape and character to the object.

Let us go one step further and examine a few simple and compound curves, together with straight lines. There is no

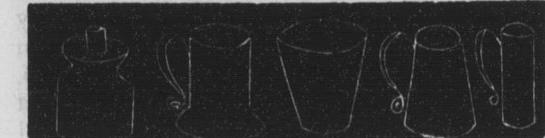


Figure 3.

special meaning in these lines, Fig. 4, but they are elements of nature's language, and can be readily thrown together so as to express a great variety of ideas. Take the illustrations in Fig. 5 as examples. Or if

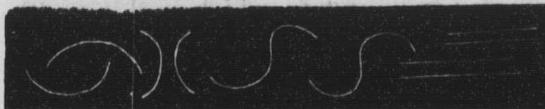


Figure 4.

we combine with them the straight line we have a new series subject to almost infinite variation. We may go on to illustrate still further with the compound curve, Figure 6. These curves may be almost infinitely varied in their relation to

each other, so as to express the peculiar characteristics of every bird that ever lived or ever will live.

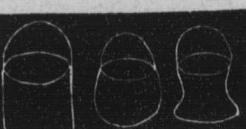


Fig. 5.

We find that man's ideas of tangible nature must be expressed in lines; for she exhibits her beauty, grandeur, picturesqueness or tameness in lines. The line enters into all our own studies of nature, and hence must be essential to the culture of a correct

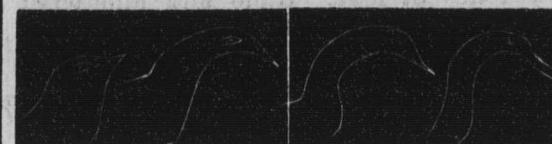


Figure 6.

taste. This fact is very often overlooked, for not unfrequently we hear persons speak of aesthetic culture as though it was essentially independent of the study of the beauties of nature. But we shall probably find that all our conceptions of true beauty are drawn from nature herself. As proof of this we have only to remember that man's association with nature always exerts a controlling influence over his taste. Let a people be reared among rugged mountain scenery and we know that their habits and view will be peculiar to mountain life. No one will probably be able to prove that conceptions of beauty are inwrought or inherent in the nature of man. He has faculties which will enable him to distinguish the beauties of nature when presented to his view, but he must gather these beauties from the opened book of nature.

As man goes on step by step he will everywhere find objects of interest and of beauty. These will mould his taste in a greater or less degree, according to the use he makes of his opportunities. Some will see more in an hour's walk than others will see in a life-time, but both must gather either directly or indirectly all their conceptions of beauty from the same source. A correct taste, then, can only result from a familiarity with the works of God as found in nature. There must be a just conception of real beauty; that beauty can be found in its perfection only in the works of God. Conventional beauty is human, real beauty is divine. We must learn not simply that nature is beautiful in its combined relations, but there must be an individual beauty which can be apprehended. This individualized beauty is what we should seek after. That is, if there are beauties in the tree there must be beauty in the branches and even in a single leaf; and if in a single leaf, then in the parts that make up the leaf.

But in this downward march through nature we find ourselves using the line as the unit of measure. To illustrate this thought still farther, suppose we study the most rugged mountain scenery. If we examine such scenery at all critically we shall find that all its grandeur is due to an

angularity and sharpness of outline that is always peculiar to such regions. If we examine the rural scenery of our own Kansas we find that gently undulating lines take the place of broken lines in the former case, and the views presented are beautiful or tame as the case may be; but in both cases it is simple lines that measure and give character to the scenery. Or we may take again a handful of leaves and flowers and the same facts present themselves. The forms are exquisitely beautiful, and all is made to please. But here as everywhere else it is the line that gives character to these matchless works of nature. If we study the forms of animal life, as for example the horse or ox, we shall find the line still as the unit of measure. If we contrast the sleek, well-fed animal with the starved creature of the same species, we cannot fail to see the important office that the line holds in the representation of ideas.

Take thus the line as expressive of comfort, ease and plenty on the one side, and want and misery on the other. We see at once what makes the difference between plenty and want, and how nature expresses that difference. The one has beauty and attracts as in the case of the sleek and well-fed horse, and the other as the picture of starvation and suffering repels. Now this is only nature's way of reporting herself to men. There is a language here; they call it the language of nature. When we come to analyze it we find it is the language of lines. It is evident that this language must hold the most intimate relation to the culture of taste. But to comprehend the force of nature's expressions will demand the most careful observation. Hence it becomes important in all perfected systems of study that men should be taught to see. The relation of the line to the industries of life, and the place it should occupy in our educational system, will demand further consideration.—[Prof. E. Gale.

If I had to preach a sermon on horticulture, says Downing, I would take this for my text: "Stir the soil." In dry weather it is very essential that the soil be stirred often. The air waters the fresh dug soil much more effectually than we can do. A man will raise more moisture with a spade and a hoe in a day, than he can pour on the earth out of a watering-pot in a week. If the ground be suffered to become close and compact the surface exposed to the air for the reception of moisture is smaller, and what is deposited does not enter into the earth far enough to be appropriated; but if the soil be loose and porous the air enters more deeply and deposits its moisture beneath the surface. Almost any soil in which a seed will germinate may be made by continued hoeing to produce a crop. Above all, cut away every weed that appears. One year's seeding may be seven years' weeding. The only use of weeds is to make a necessity of tilling the ground more frequently.—[Ferry's Catalogue.

THE INDUSTRIALIST.

SATURDAY, JULY 15, 1876.

TIME-TABLE OF THE K. P. RAILWAY. PASSENGER ARRIVES.

Going East.....	10:45 A. M.
Going West.....	3:47 P. M.

FREIGHT ARRIVES.

Going East.....	12:15 A. M., and 2:25 P. M.
Going West.....	8:00 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, July 12th, 1876.

DAY.	Temperat'e			Bar'tr Mean Daily	Wind. Direc- tion. Veloc.	State of Weather
	Max.	Min.	Mean			
Thursday...	90°	74°	81.7	29.734	S 48	Clear
Friday.....	90	74	82.7	29.806	S 40	Fair
Saturday....	90	73	82.2	29.786	S 19	Clear
Sunday.....	89	68	80.2	29.829	O 0	Fair
Monday.....	89	66	78.2	29.795	S 6	Clear
Tuesday....	94	61	80.7	29.865	S 4	Clear
Wednesday	97	60	84.0	29.816	S-W 4	Clear

Rain-fall, Sunday, July 9th, 20.

HARRY F. McFARLAND,
Serg't Signal Service.

M. F. Leisure starts for the Centennial next Monday.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

The best crop of barley ever raised on the College farm has just been harvested.

The maple worm is stripping the leaves from some of the maple trees in this vicinity.

Prof. Hougham, connected with the College some years ago, is here spending a few weeks with his son Harry.

This is the way the President closes a communication to us: "Send some Kansas air. Yours, melted, Jno. A. A."

The pipe was laid this week for conducting the water from the large tank to all parts of the laboratory building.

Mr. E. T. Carr, of Leavenworth, the architect, was here last week giving instructions regarding the work on the new buildings.

The College farm has just added to its herd of swine a very fine young Berkshire boar. It was purchased by Prof. Shelton while on his way East.

Durham Park has furnished the Farm Department with an excellent Shorthorn bull to take the place of Zenas King, the one which was sold some time since.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

Irving Todd, who learned to set type at the College, worked at this office last week, and we were surprised at the proficiency he had made in mastering the trade.—[Nationalist].

Although it has been very hot here this week, it is little more than nothing compared with the heat in the eastern cities, where many have been attacked by sunstroke and several have died from its effects.

The contract has been let for furnishing and putting down the stone on the walk graded from Manhattan to the College, and the contractors agree to have the walk completed by the 1st of September.

Frank Quinby's mother is dead. She is referred to as having been a fine, christian lady who led a very exemplary life, one worthy of imitation by a student's use.

all young ladies. The students will join with us in extending sympathy to Frank in his sad bereavement.

We call particular attention to the advertisement for School District Bonds in another column. District clerks and others interested in the matter will do well to make a note of this fact. All school districts having bonds to dispose of will insure the fulfillment of this offer only by applying immediately.

The rain of the past two days has interfered somewhat with work on the buildings. It has prevented Mr. Winne from finishing the stone work on the laboratory building, and unfortunately came just as Capt. Todd was getting through with the cellar for the horticultural building. A few days, however, and the ground will be dry enough for the resumption of work by all hands.

Some changes have been made in the room occupied by the Sewing Department. About eighteen feet of the north side has been devoted to shelves and drawers, in front of which a very substantial counter has been placed that also contains a shelf and drawers. A partition now runs east and west through the center of the room, with a door at the east end of it. We understand that the cutting and fitting will be done in the north room, and that the other room will be used exclusively for sewing.

We tried harvesting this week. Our part of the business was to run the reaper, and while it was easy compared with the work which the binders did, it was as warm a job as we wanted. A pair of mules was hitched to the reaper, the day was very warm and the flies very thick, and our sympathies went out towards those mules. We thought we would brush the flies away from their legs, but upon being cautioned as to the extreme familiarity of the brute in always wanting to shake hands when approached, we wisely concluded to let the flies have their own way.

Students desiring to rent houses for occupancy during next College year would do well to attend to it early, for soon all the best locations near the College will probably be engaged. For terms for rooms in the old College, or the building south of it, or the house known as the horticultural building, address J. E. Platt, Manhattan. Besides these are several buildings situated between the College and town which may be rented for a reasonable sum. Old or new students will receive prompt attention to any matters of this kind by addressing J. A. Anderson, Manhattan.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder
Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

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[Concluded from first page.]

waters of toil and trouble landing them safely on the other side, where it leaves them and goes back to guide another wanderer; and so it takes first one and then another through the experiences which so many find so bitter and hard to bear alone. For one who has to work for herself there are often trials hard to bear in themselves which also serve to make the road more rough and stony and the roadside full of weeds. Still if such a one look carefully along her pathway she will find some bright flowers though she may have to search long for them, may have to pull over the weeds until she is almost in despair and thinks she will never find them. But at last they are found deep-hidden, a bright bit of loveliness that comes to cheer her in her loneliness and sorrow, for God never created a human being without some marks of beauty and a chance for joy in some form. How much there is in life for which to be thankful. How much we might do if we only gave our whole hearts to the work. And in our work for the crown of life we must remember that it is not the one who does most, but the one who does best his life work. The way of our work may not lead us very far, but it will give us enough to do, and if we always do our best we shall stand in the first rank.

Life is for each one of us to make for ourselves. Even if we have these helps along our pathway, we must take the steps, we must do the solid work here in this life; and if we do it well, if we have an unfaltering step when we reach the other side of our island, the end of our path, we shall know that we have a firm foundation on which to continue our work in a world without end. We shall have no cause to regret wasted time, but shall feel that we have spent our lives as best we could.

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THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JULY 22, 1876.

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Beauty and Science in Real Life.

[An Oration delivered by Miss Ella M. Gale, a member of the graduating class of the Kansas State Agricultural College, Wednesday evening, May 17th, 1876.]

There are two sides to life; the one ideal, the other real. The first is what we wish to be, the last what we are. While a person may fancy he is basking in the soft, tinted light of the Indian summer of idealism, he may in reality be sailing over a wild and stormy sea under the blackest of murky skies. This strange power affords much happiness to the human race. Many of earth's weary workers derive their only peace from this source. By this power many deep and burdening sorrows are transformed into bliss; the rough corners and angles of life are rounded and polished; fair and noble thoughts are born; and what was fair and noble is made still fairer and nobler. It gives a different coloring and a brighter tint to life; in fact it makes life more what it should be.

By an ideal life we do not mean that which we live in our day-dreams, but that true life which is found in all its purity and beauty in our brightest conceptions. This great world has a very small place for idle, listless dreamers. What is most needed is action,—live, telling action. Our day-dreamers would be sadly jostled in the crowd and hurry of the busy mart. The questions are, What to do? How to begin? In fact how to act? These solved we are sure of success. We find many willing to follow and but few to be leaders. We need something for the present, something now. We are so constituted that, whether it is our will or not, we are ever looking to the future. Our ideal is beyond. The present does not satisfy us.

There are also two objects or aims for science. Figuratively speaking, we might say everything is two-sided. In this utilitarian age the cry is often raised, "What is its value? What is its use?" The human heart far more highly appreciates the possession of the useful than the useless; yet this is not the sole standard, for there is something beyond the naked use of objects, else why this beauty we see around us? Why do the broad fields of grain when fanned by the summer zephyr present such a fascinating attraction as the puffs come and go, reminding us of old ocean with its ceaseless flow of countless waves, bearing so proudly their white caps to the shore and then humbly laying them down and are gone forever? Why does the child looking out on the snow-clad, and moonlit hills cry for the bright, sparkling gems before him, and when permitted to reach out his tiny hand grasps only the icy

coldness of the snow-flake? Why, even while the cruel thorn is causing the flesh to quiver from its puncture, is there wafted on the air sweet odors of the rose? Why do the great volumes of vapor suspended above us present an ever varying and changeful appearance? Why do they not hang in dull, leaden, threatening masses? Would not their use be as great? But when as the day's parting benison we behold the beauty of clouds draping the western sky, gently touched by the last rays of the departing sun, we instinctively answer, No.

There are two uses; the one absolute and practical, the other the beautiful or aesthetic. It is these uses of objects which are taken as a standard of value; and just in proportion as anything is capable of contributing to human happiness, in just that proportion is its worth increased. Aesthetics has been defined as a "heavenly ladder where, like Jacob's angels, pure thoughts and holy aspirations come from and go to God." Everywhere we find it so closely connected with science that it is impossible to separate them, nor would we wish to, any more than we would wish to blot out from the face of the heavens all the starry splendors of illumination, or efface the rainbow, or take from the countenance of man all the expressions we see portrayed there. Strip the world of all its ornaments, the forests of their leaves of every hue and shape, the valleys of their flowers, the mountain sides of their sparkling, dashing rivulets; rob the sea of its pearls, the earth of its diamonds; draw a curtain over the face of the sun; and what a cheerless, desolate waste; what an eternity of darkness in which to dwell! So it is with the mind of man: rob him of his sense of the beautiful and we have robbed him of almost his life. It simply renders him a moving, grinding machine.

Science should be approached from its useful side, and hence arises the question, Can we study it from a practical standpoint without infringing on true aesthetic culture? For answer let us ask another question, Why are our artists' works of art so much truer to nature than the rough figures which the untutored savage hews on the sand-cliffs in the West, or the figures or caricatures with which the Chinese label their tea-boxes? Is it not because we deal with lines more practically than they do? In geology we may study the theoretical part so that we understand perfectly the progress of the globe, can speak knowingly of the grand upheavings of the crust, the foldings and fractures, metamorphisms and igneous ejections that have made the land we tread what it is—a fit abode for man; be able to trace life from the smallest protozoan and sea-weed to this the grandest age the world has ever known, where man stands forth the image of God, the perfection of physical strength, the only being possessing a spiritual nature; yet it is not until we combine the theory with the practice which we gain by studying the earth's strata and fossils that we fully comprehend the whole. We are filled with awe at the unsearchable-

ness of infinity and fall more humbly at nature's shrine. So we see that studying science practically increases aesthetic culture. We know the power of appreciating beauty, as we see it in nature gives to the lives of those who possess it higher motives and higher aspirations; far higher than to those who walk blindly through the Eden paths of life.

As we have shown that there is something besides mere use of objects, so is there something besides mere beauty to life. In every enterprise of civilized man science acts directly or indirectly. In many instances we are unconscious of its presence; yet it is there and with a willing heart and ready hand is working out for man problems too deep for his feeble mind to penetrate without its aid. Let us see how science enters into our every day. It is so woven and interwoven with each development of an enlightened people that scarcely a movement is made without it. Science might be termed a spirit of God sent into the world to render plain to the thought and hand of man the truths and works of nature. It has given man the power to grasp from the thundering clouds the dancing flash of lightning, and placing it on wires has encircled the globe and thus formed a speaking-trumpet to which all the world hearkens. It has given to the inanimate locomotive the power to fly across continents, announcing by a shrill whistle its approach to every village; and yet this terrific force is controlled by the slightest touch of man. It has utilized the wind so that we can cross the unfathomable deep, visiting other continents and other climes.

Science has even attacked light, decomposed and recomposed it until it is rendered almost subservient to the will of man. It is made to play upon lenses of all forms; those of the microscope, by which we can study the littleness of atoms; of the telescope, by which we can comprehend the boundlessness of unbounded space, and also study the blazing orbs, proclaiming their distances and sizes in inches. When old age asserts itself in the dimming of nature's lenses, science comes in with one of its own manufacture and the blind are made to see. The photographer appreciates the instrument it has given him whereby he can avail himself of light's effects. The weather-beaten mariner breathes many prayers of thanks for those immense reflectors which send bright flashes of light across the storm-tossed sea.

Science has laid her arm across nearly all of our streams, producing water-powers which gladden not only the farmer's heart but all the world. Chemistry with its various compounds enters into every one's life; it teaches us how to make, handle and utilize that which we can neither see nor feel; it fixes the pigments in the arts; it singles out compounds that are destructive to life and forbids man to taste under penalty of death; analyzes soils so that the farmer can act intelligently; it is even found in the kitchen giving instruction to

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, JULY 22, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

The Line in Industrial Education.

If we examine the most simple mathematical figures, as a triangle, square or circle, we find that they resolve themselves at once into lines. If we come to study the daily routine of business in any of the active pursuits of life, we shall find constant use for these simple figures. Take for example architecture as a pursuit, and we find the line in its various possible combinations really the only element of expression. The carpenter carries on his work only by the constant use of the line; he must hew and plane to the line; all his skill centers in his power to work to the line. The same is true in all mechanical pursuits. All strive after beauty of form, but can never reach it only as they work to the line that embodies that form. The potter moulding a vase can never bring out an attractive object only as he recognizes the linear features of beauty. There must exist a conception of the beautiful object in the mind of the workman, not simply as a whole but as made up of parts defined by lines. Whether recognized or not there must be a more or less perfect analysis of the combination. We accept this principle when applied to vocal sounds, but we do not recognize it so readily when applied to forms. We now teach the elements of vocalization, but in the study of the language of nature as expressed by the line, we have been content to teach so far almost by rote. It is not strange then that our progress has been slow, and that there is a vast domain of ideas scarcely accessible to those usually termed thoroughly educated.

If we put a pencil in the hand of a child his first rude efforts will be in the direction of linear study. If we were to watch a Reynolds in the execution of his grandest conceptions, or a Page in his masterly delineation of the human face, we would find them still only students of lines. There may be a marked skill in the blending of colors, but the real power of these men will be found in the mastery of lines. It is in lines that they make nature speak, and their true skill lies in imitating nature's own language. No possible combination of articulate sounds can picture a lovely face or a beautiful landscape. We may get a faint conception of nature's beauty from the elaborate description, but feeble will be all our ideas by the side of what the true artist may give us by a few touches of his pencil.

It is easy to see that the study of lines enters into the artist's life, but it may

not have occurred to us how thoroughly the language of lines is interwoven into the industrial pursuits. Go from the studio of the painter or sculptor to the work-shop of the artizan, and we find him constantly dealing with lines. Talk to him of his work, and if he is master of his trade he will reply to us in lines, and possibly compassionate the college-bred dullness that fails to comprehend them. This is true of all the departments of mechanical life, as engineering and surveying, carving and engraving, cabinet-making and upholstering, paper-making and printing, carpentry and masonry, shoe-making and blacksmithing, farming and horticulture, indeed every pursuit outside a strictly professional life.

And if in passing we desire to separate the industrial pursuits from those that are strictly professional, we can designate the former as the linear pursuits of life, for in these the line is some way involved at every step. We believe this classification is important as marking clearly the outlines of industrial education, and at the same time indicating the direction which that education should take. It is probable that we have been too willing to accept the dogma that the artist occupies a professional rather than an industrial position. We do claim, however, that the artist and the artizan must stand together, and that their education should be to a large degree identical.

As already intimated there is a large class of ideas that can alone be expressed through the language of lines. These are frequently important in themselves, and at the same time they often hold the most intimate relation to the culture of the race, and frequently to the pecuniary interests of society. Nature's forms of expression have always been important, have always exerted a powerful influence over the human race, but in the progress of science and art they seem destined to be far more important in the future. The modern improvements in linear representation as illustrated in photogravure cannot fail to have a powerful influence in this direction. We see in this how easily the pictorial representation takes the place of the written description. The just or unjust fancies of a Nast sketched to-day go broadcast over the land tomorrow, and become powerful to make Governors or Presidents. Here lies an almost dormant power which will find its use in all the departments of society. Yet when we examine our systems of education, we find that this department of study has hardly a recognized place. We desire to thoroughly examine this subject, and see what are its claims for recognition in the educational system of the State.—[Prof. E. Gale.

'RAH for Kansas and her "craps!"'

Pruning.

The subject of pruning has been as severely treated as many of our trees by the professional pruner. Most men have some idea that all trees need pruning. There are a few who, going to the opposite extreme, insist that trees need no pruning. It is not strange, perhaps, that such ideas should obtain where so much useless and often positively injurious pruning has been done. It is certain that there is no work connected with horticulture about which such discordant views have been held. Some say prune severely, others say not at all; some prune to open the heads of the trees, others only to raise the heads from the ground; some prune whenever they have a sharp knife, others only in June, and others still only when trees are in a dormant state. It is not easy to settle all these conflicting views, nor is it essential to attempt it, for under certain circumstances something can be said in favor of all these positions. But this is true only when we desire to work out special ends. A few simple rules which can be regarded as general in their application is all that we have room to give here.

If you wish to secure a healthy tree, severe pruning is at no time safe. If you would secure early fruitfulness and a short-lived tree, cut severely in the growing season. Do not open the heads of your trees in Kansas as you would in a cooler and damper climate. Do not prune up the heads of your trees as you would in the East. Prune with reference to protecting the southwest side of the trunks. Remember that the wood growth of the tree depends upon the leaves, and that the development of wood cells is always downward from the leaf to the root; then to remove the leaves serves to check the wood growth, and hence to weaken the vital forces of the tree. Summer pruning should always be slight, and if possible generally avoided.

Thousands of trees are pruned to death when first taken from the nursery. It would save much time and anxious care if about one-half of our tree planters would put their trees into the brush pile when they first get home, as by over pruning they are sure to get there in a few years. The only safe course is to remove no large limbs, and to prune at all only when you can see good reasons for it. Always use sound common sense in the treatment of vegetable life, remembering its distinctive laws, just as you would in dealing with animal life. All organized existence suffers by pruning. Our effort should be to make trees what we desire them with just as little pruning as possible. Our ideal of a perfect tree is that of one which has attained its natural symmetry of outline without the use of the knife.—[Prof. E. Gale.

WE want the name of every new paper.

THE INDUSTRIALIST.

SATURDAY, JULY 22, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:40 A. M.
Going West.....	3:52 P. M.

FREIGHT ARRIVES.

Going East.....	12:25 A. M., and 12:55 P. M.
Going West.....	6:15 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, July 19th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	93°	69°	81.7	29.713	S	30
Friday.....	82	64	72.2	29.911	S	6
Saturday....	89	70	80.5	29.893	W	10
Sunday.....	92	73	82.2	29.824	E	18
Monday....	95	74	85.0	29.934	S	16
Tuesday....	95	73	83.7	29.949	S-W	12
Wednesday	93	71	82.7	29.930	S	6

Rain-fall, 1.40.

HARRY F. MCFARLAND,
Serg't Signal Service.

Corn is silking and tasseling.

The masons are at work on the horticultural building.

The plasterers are preparing for work on the laboratory building.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

The lightning-rod on the tower of the laboratory building is sixty feet from the ground.

Miss Kate Ward is in Scranton, Pennsylvania, where she has been engaged to teach school for a year.

A Grand Division of the Sons of Temperance of the State of Kansas, was organized at Manhattan, on the 18th inst.

Although angels' visits may be few and far between, Misses Ella Winne, Jennie Thorpe and Maggie Esdon called on us this week.

H. C. Rushmore, of Grantville, Jefferson county, has written for a place to board. This sounds as if he intended to attend College again.

The weather vane was hoisted upon the tower of the laboratory building this morning. It gives a decidedly high-toned appearance to things.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

The rain last Wednesday was very acceptable to everybody and everything. This portion of Kansas has been very fortunate in the matter of rain-fall this year.

Prof. Platt boarded the eastward bound train Wednesday morning, en route for the Centennial. Only two Professors left now, and one of them—but we promised not to say anything about it.

Miss Kate White, daughter of N. B. White, of Manhattan, and a graduate of this Institution, was married in Chicago, on June 12th, 1876, to Mr. Z. T. Turley, of Mount Sterling. The happy couple immediately started on their wedding tour, which takes in Manhattan where they are now visiting.

Nearly all the members of the Faculty who are in the East this vacation have been heard from, and, while united in the statement that the Centennial is a big thing, they express themselves very emphatically regarding the heat, and long for our Kansas breezes. Kansas against the world!

We call particular attention to the advertisement for School District Bonds in another column. District clerks and others interested in the matter will do well to make a note of this fact. All school districts having bonds to dispose of will insure the fulfillment of this offer only by applying immediately.

Mrs. Cripps dropped in on us all of a sudden Friday morning. She was going to Lyndon, Osage county, and was in a great hurry, but we preserved a few of her exclamations: Crystal Palace—Centennial—heat in the East—crops in Kansas, no place like it—the new buildings—the counter and shelves in the sewing room—good-bye.

A gentleman by the name of Shaw, at work upon the laboratory building, had his little finger broken accidentally the other day, by the fall of a piece of timber. Another gentleman, by the name of Griffin, also at work upon the laboratory building, was splitting some wood after his return home the other evening, when the axe slipped and went through the under side of his foot lengthwise. Griffin was a faithful workman, and will be missed, but he will probably be given an easy job on the building that will enable him to go to work again soon.

A bond on a school district in Harvey county, made out on one of the Agricultural College blanks, complete except the certificate of registry, unaccountably disappeared a few days ago. The parties owning the bond had fears that the certificate of registry might be counterfeited and the bond negotiated. As bonds on our blanks can be negotiated only by passing through our hands, being drawn to our order, they will not be very profitable to steal. By this means we secure both the district and ourselves against loss, and hence can afford to pay more for such bonds than for others. There is also the special advantage that they can be sent through the mails like a draft with only regular postage.

This community was startled on Thursday morning by the announcement that Mr. Wm. E. Goodnow was dead. It seems that on Wednesday he was assisting Mr. Whitney with his threshing, and was as healthy and jolly as ever all day. He was measuring the grain, and about six o'clock went to the register for some purpose, when, just as he stooped over, he threw up his hands and fell backward a dead man. The back of his head struck on the wheel of a wagon and received an ugly bruise, but the doctors say that appoplexy or heart disease was the cause of his death.

This is a sad affair, and has cast a gloom over the entire neighborhood. Mr. Goodnow was past sixty years of age, an old resident of this county and a member of the Congregational church of this city. His brother, I. T. Goodnow, who was at Lincoln, Nebraska, was telegraphed for and reached here with his family, on Friday afternoon, and at 5 o'clock of the same day the funeral services, attended by a large number of citizens, were held in the Congregational church.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder
Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets.

16

Clother.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan.

37-3m

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

Gardening for Profit!—Instruction and Drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening. Kansas Forest Culture a specialty. Seventy acres devoted to experimental apple, pear and peach Orchards, Vineyards, Nursery, and Gardens.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects inimical to the Kansas Farmer.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf

GEO. W. MARTIN, Publisher.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan.

10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

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Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

[Concluded from first page.]

the maid ; while the laundry and dairy are subject to its guidance. In the insect world science tells us our friends and enemies, and robs them of their bright coats for dyes. Even the little silk worm enjoys no more its silken cocoon in unmolested freedom, but science has robbed it and with deft fingers is unraveling its skeins and weaving them into delicate fabrics to please the heart of man. It has made miners of men, and taught them where to delve for that which enriches the earth's storehouse with gems and metals of all kinds. Science stalks through the garden, orchard and farm ; in fact is everywhere and in everything.

We thus see how the onward march of the race is associated with the real progress of science. To cripple scientific investigation is to cripple the industries of life. We cannot do otherwise than feel a respect for the original inquirer after truth. We may not see any great result at once ; even the individual may be unconscious of the grandeur of his labors, yet he may hold in his hand the key which is to unlock the unbounded wealth of nature to future generations. He may take up the elements of future social, financial and even moral revolutions, all unconscious that what he may deem as the playthings of his study are to act like nitro-glycerine under the foundations of old notions. All honor then to those who give themselves to the hidden things of nature.

But it is the varied and profitable applications that can be made of already known truths that most concerns the mass of men. The great question then is, How are we to make the most effective applications of science ? The field of inquiry is too broad for one life or a hundred. Yet the practical truths may be readily grasped and applied. It is at this point that the interest of the race centers. It is well to know what science is ; it is better to know what it will do. It is well to understand the laws which govern electricity ; it is better to know how to use it in sending our messages around the world. It is well to comprehend the laws that govern vapors under pressure ; it is better to know how to drive the engine with a village at its heels. It is good to understand the laws of light ; it is better to make that light photograph the varying emotions of the human face. We are not then to ignore the one side while we embrace the other. The theory and practice must hold a certain relation,—the relation given them by the Creator ; and if our conceptions of beauty are gathered directly from the works of nature, it is certain that the highest mental culture may be attained in the more protracted study of the practical applications of science.

It is with proud hearts that we Americans can review the past century and see what wonders science has developed for us. May future generations look back over the coming century with as grateful hearts as we are looking back to-night. And may the all-wise Father guide as faithfully the hands which are to work as he has guided those that have worked.

There is a time in the student's life when it awakens only pleasurable emotions to look forward to bidding good-bye to the routine of school-days ; yet it is with feelings akin to pain that we perform that duty to-night. For our President, each and every one of the Professors who have so kindly aided us in our pursuits of knowledge, we have the highest respect and the sincerest gratitude, and in behalf of the class we fervently, truly thank you.

Fellow-students, you who have with us almost been as members of one family, sharing in a degree the same joys, the same sorrows, the same interest in our studies, recitations, societies, meetings, and social gatherings, it is with feelings of great reluctance that we leave you. Many faces now familiar we may never see again ; yet we will ever remember your kindness and well wishes, and retain pleasant memories of school-days and school-mates. May you gain that knowledge that will fit you for high positions in this life and still higher for the next. Hoping you join with the prayer of the class that God may bless our Alma Mater, we bid you all a farewell and Godspeed.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

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Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

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Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art ; and, also, an expert in Practical Mathematics, including skill in the use of numbers ; in the use of lines, or Industrial Drawing ; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas ; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants ; of light, heat, and moisture ; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth ; of Economic Zoology ; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

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Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

• TUITION ABSOLUTELY FREE! •
No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, JULY 29, 1876.

No. 15.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription. Advertising rates made known on application. Address A. A. STEWART, Manhattan, Kas.

Still Better Things to Come.

[An Oration delivered by Miss Carrie M. Kimball, a member of the graduating class of the Kansas State Agricultural College, Wednesday evening, May 17th, 1876.]

The future is before us; the past is behind us; the present is with us. As the years roll along, freighted with their new lessons, new experiences, new hopes and new joys, we are still ever looking for better things to come. In the past we have been happy students, gaining knowledge that will prepare us, if rightly used, for usefulness and success in life; striving to do our best in industries, arts and sciences; garnering treasures of thought and experience that will grow and expand in the future, when we shall have nourished and brought them to perfection and woven them into the web of our lives.

Toll is demanded of us at every step through life. If we would be successful in anything, we must be willing to pay for our success either in sacrifice, hard work, or in some other way. If we would enter the gates of knowledge, we must pay toll by diligent application of facts and principles, by remembering that there are dearer possessions than lands and merchandise; realizing that there is something in human nature like gravitation, ever tending downward. A shot that is aimed below the mark will never reach it; we must set our mark high and then aim still higher, looking forward to and expecting still better things to come. There is an ancient Greek story of several persons who, in making a voyage on the Mediterranean, were cast away and thrown upon an island, having lost all their goods. Among them was a scholar who remarked to his fellow voyagers, whose entire wealth was invested in merchandise and which was now sunk in the sea, that his treasures being stored in his mind had survived a calamity which had proved fatal to their treasures.

Time spent in gaining knowledge and storing away truths can never be lost, never be cast away or wrecked; for it is strongly anchored, every link in the chain firm and storm-defying. Each one is entrusted with the care of himself, and therefore how important it is that we be able to govern ourselves aright,—cherish kind thoughts, keep our hearts warm, our minds bright and active, our lives honest, our feet in the straight path, our hands doing with their might what they find to do, and our eyes watching for still better things to come.

To-day we repeat those German lines:

"The Near afar off seems, the Distant nigh,
The Now a dream, the Past reality."

realizing their truth, and hoping and trusting that our past in our future will prove

a bright reality and a never-ending source of pleasure and profit. And when for us there is to be no more future here, and we draw near the hereafter and near the ending of the strife, may we, from the shadows and mists that gather around us, look triumphantly forward to the mystic, silent shore across the dark waters, and on our visions may there dawn still better things to come.

Prof. Riley's Eighth Annual Report.

One of the penalties of a civilization which is able to carry passengers from the Atlantic to the Pacific Ocean in less than four days, is the compulsory transportation of contagion and insect pests at correspondingly rapid rates. The march of the Colorado beetle, however, from the Rocky Mountains to the Passamaquoddy Bay, which we expect him to reach this year, must be regarded as rather slow, since it has taken him something more than half a century to get over the ground with all the modern conveniences for locomotion. Fifty years ago the observations of a Missouri entomologist would have had little interest for a cultivator of the soil in Maine, who now, thanks to the appearance of the inexorable potato-bug, suddenly wakes up to the fact that Dr. Charles V. Riley's annual reports have something more than a fresh-water and inland utility; that though paid for by the State of Missouri their value is not local merely.

In his eighth report, just received, the Colorado potato-beetle has the post of honor, and we learn what it will feed on, what will feed on it, what Paris green and sundry patent mixtures will do for it, what its native haunt is, etc., etc. Dr. Riley mentions two new natural enemies of it, one being our friend the common crow, which "even digs up the ground to get at them after they have entered it to hibernate." More briefly we are told of the canker-worm, and more at length of the army-worm, whose enemies are legion, and manage to keep them down so effectually that "two great army-worm years have never followed each other, and are not likely to do so."

The greatest space is naturally allowed to the Rocky Mountain locust, which Dr. Riley does not regard as a divine visitation, and does not believe can ever obtain a permanent settlement in Missouri. Some of the compensations for the destruction which it caused last year are curious and noteworthy. Thus, the locusts robbed the dreaded chinch-bug of the vegetation on which they commonly lay their eggs unseen, so that they were obliged to lay them in exposed situations where the young broods were doomed to perish. The result is that exemption from this pest, which the Missouri farmer has always with him, is secured for two years at least, and the same is true of many other insects. Then, again, the locusts in dying left a rich coating of manure which made the soil of the stricken country unusually productive. In fact the fruit-growers suffered much more

heavily than the grain-growers and stock-raisers. After the devastation was over there was a great prevalence of plants which in ordinary seasons are scarcely noticed, among them the grass known as the *Vilfa vaginæflora*, generally suppressed in its struggle for existence with the blue-grass, but which sprang up whenever that was killed, and, while young and tender, furnished a fattening nutriment to the cattle.

Dr. Riley's account of his experiments to test the edibility and palatability of locusts is extremely entertaining. He succeeded in demonstrating that they make excellent soup, and can be served up in a batter as cakes, or simply baked or fried. "When freshly caught in large quantities, the mingled mass presents a not very appetizing appearance, and emits a rather strong and not over pleasant odor; but rinsed and scalded, they turn a brownish-red, look much more inviting, and give no disagreeable smell."—[New York Nation.]

Specialize Farming.

Farming, itself the mother of every other employment and vocation, has never been specialized or sub-divided as it should be in order to be a successful or paying employment. This is an age of research and discovery; new sciences are springing into existence; old ones are being divided, e. g., every important organ in the human body has a class of physicians devoted solely to its diseases; so also of law, etc. Farming should not be behind in the onward march of progress. "That which is everybody's business is nobody's business," and the man who is "jack of all trades" never understands or can successfully engage in any one. Just so the farmer who depends a little on every kind of grain, stock and other farm products, and not on any one in particular, will come out at the end of the year with a shallow purse. The sections of our country in which the farmers are the wealthy and independent class, are invariably the sections devoted to some particular branch of farming which has been found to be the one particularly adapted to that locality. Farmers should raise a variety of grain, stock, fruit and vegetables, in order that their tables may be supplied as the tables of sovereigns of the soil should be, but they should depend on one or two things for the bulk of their income.

Some farmers seeing others make money out of some particular crop or kind of stock, forthwith rush wholesale into the same specialty without the experience or means necessary to succeed. They of course fail and lose money; but instead of learning in the school of experience and discovering what their specialty should be, they rush wholesale into the first thing that brings a high price in the market, and by the time they are ready to supply the demand others have glutted the market, and they are compelled to sell their large stock in hand at ruinously low prices. *

—[Correspondence American Farm Journal.]

THE INDUSTRIALIST.

SATURDAY, JULY 29, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

The Line as the Measure of Human Culture.

We shall find that the power to comprehend the force of blended lines, or the power to combine these lines into forms of beauty, furnishes us with an exact measure of human civilization. Though we may not be able to measure man's civilization by the yard as we measure tape, we can most certainly do so by the aid of the line as an index of taste. In the savage state we find only the rudest conceptions of form. Their artistic productions, if they merit that name, are characterized by marked angularity, by very faint approaches to nature, and a general rudeness which corresponds with the wild state in which we find them. If we were to examine the rude pictures which make up the autobiography of Sitting Bull, or the sketches frequently found upon the bluffs of western Kansas, we shall find this fact clearly illustrated. Their artists have got scarcely beyond straight lines. But rude as these productions are, they reveal the fact of a move toward civilization, and are interesting as marking the road by which men have always come up from barbarism.

If we look at the sculpture and paintings of ancient Egyptians, we shall find something far in advance of what we have just examined. We shall see a clearer representation of natural forms; the lines are more graceful; the work in its several parts more expressive; and if we had no other knowledge of these people than that furnished by these pictures, we should be warranted in looking for a far higher civilization in the latter case. Place by the side of these again the artistic productions of India or China. We have here, in their wild, whimsical, incongruous and unnatural blending of lines, an insight into that ancient but rude civilization.

If we now come to the works of Grecian, Roman, or more modern art, we shall find that both the chisel and the pencil give evidence of a wonderful progress in the conception and production of artistic beauty; and yet there is here only a closer conformity to nature. The history of architecture, as it may be traced through the ages, also closely illustrates the relation of the line to the civilization of man. Man's first home was probably little better than the shade of the forest. Then came the rude hut,—the wigwam made of branches and the skins of animals; the mud hut,—perhaps the original dug-out on the banks of the Nile or Euphrates; then the rude structure of beams or of stone, the latter

in some cases antedating probably by many centuries the remains of Grecian art, and showing some advance in civilization.

And, tracing on the prevailing type of architecture through successive ages, we shall find how the ideas of man, wrought out in stone, give evidences of his civilization. We find both in art and architecture the almost expressionless straight lines of the early periods gradually softening down, and conforming more and more to the wonderful beauty of nature. But in the decay of national taste we have a still more remarkable exhibition of the use of the line. Here there is no return to the angularity of former ages, but an adoption of conventional forms that replace the beauties of nature by extravagant deformities, and represent in lines the effeminacy and vileness of a degenerate race.

The relation of the line to human progress is still further illustrated by the gradual moulding of alphabetic forms during successive ages. It is certain that men must have made some progress in civilization before an alphabet could have existed; but far back of what is called the historic period, we find the arrow-head alphabet, composed of little else than straight lines. These letters suggest a rude state of society, where the symbol of war is made to awkwardly record deeds of cruelty and death. Gradually the rude forms of the early ages were rounded off and condensed, as the culture of the race progressed, until we have after a long period the ancient Greek. These Greek letters, as compared with the alphabet of more distant ages, or as compared with the rough letters of the old English or German even, seem peculiarly adapted to express the conceptions of an eloquent and cultivated people.

Each successive age has been thus marked by its peculiar type of art and architecture. As we approach the periods of the highest culture, we find a characteristic adherence to nature's types, both in general outline and in detail. We find the line in art taking on innumerable forms, and its varied combinations really recording a very wide range of facts, thus indicating on the part of the people a far wider mental range and a far richer aesthetic culture. Thus we have the beautifully rounded figures, the very models of perfected nature, in striking contrast with the rude and shapeless productions of the barbaric or semi-barbaric ages. Or, again, we have those same exquisitely chiseled forms in the strongest contrast with the grotesque, lascivious and grossly exaggerated productions of a more degenerate period.

As we look at the delicately rounded and harmoniously proportioned forms of our age, as compared with the rude, inelegant and unnatural productions of another age, we are not at a loss as to the comparative

culture of the two periods. But the line in its varied and wonderful combinations is the basis of both results. Both classes have drawn their conceptions of beauty from the same source and express them by the same instrument, and yet out of the same materials one has constructed almost infinitely better than the other. The one has caught nature's sweetest expressions, while the other has caricatured the same features. For an obvious reason the principle here urged has been illustrated from the departments of art, architecture and letters, but it can be readily seen that the same gradual development from the simplest elements must have characterized all the industrial pursuits of man. Go through the work-shops of the world and study the progress of the various pursuits in the light of history and experience, and we shall be forced to the conclusion that the culture and power of a man in any of these pursuits, depends very largely upon his ability to comprehend the force of lines and to blend them into forms of beauty.

Hence, if the positions so far taken in this discussion are true, we must assume that in any correct system of industrial education the study of the line, in its varied applications, must take the first place. This is a radical position, and we should neither accept or reject it without mature consideration. To accept would require a marked innovation upon our time-honored system of education. We must accept the fact that the use of the line makes up the essential difference between the professional and industrial life. In the professional life the application of the line can only hold a subordinate position; but with the industrialist that same line holds a primary place, and will come constantly into use every day and hour of his business life. It does seem that the relation of the line to industrial life should long since have been accepted; but if not now, it will be in time acknowledged as the real basis of industrial education. This fact accepted another position must follow, that the co-education of the industrial and professional classes can never be a success.—[Prof. E. Gale.]

IN our climate low-headed trees should always be secured. By this means trees will soon protect themselves against sun-scald. But trees just transplanted need artificial protection. Hay or straw tied firmly about the bodies makes a good protection against both sun and rabbits. This protection should be put on in the early spring, and so firmly tied—without binding the tree—that it will remain at least two years. Trees thus cared for will not suffer from borers or rabbits. Such a protection, applied when the tree is first transplanted, also serves an important office in aiding the tree to recover from the shock of removal. One of our most successful orchardists always protects his trees in this way, and the result as seen in his case justifies the course.—[Prof. E. Gale.]

THE INDUSTRIALIST.

SATURDAY, JULY 29, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:25 A. M., and 12:55 P. M.
Going West..... 6:15 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

WAR DEPARTMENT.

SIGNAL SERVICE, UNITED STATES ARMY, STATE AGRICULTURAL COLLEGE STATION.

For the week ending, July 19th, 1876.

DAY.	Temperat'e			Bar'tr	Wind.	State of Weather
	Max.	Min.	Mean			
Thursday...	93°	69°	81.7	29.713	S 30	Lt Rn
Friday.....	82	64	72.2	29.911	S 6	Lt Rn
Saturday....	89	70	80.5	29.893	W 10	Cloudy
Sunday.....	92	73	82.2	29.824	E 18	Clear
Monday.....	95	74	85.0	29.934	S 16	Fair
Tuesday....	95	73	83.7	29.949	S-W 12	Clear
Wednesday	93	71	82.7	29.930	S 6	Fair

Rain-fall, 1.40.

HARRY F. McFARLAND,
Serg't Signal Service.

Well, George, we are all waiting now for you to get married.

A fine crop of millet is now being harvested on the College farm.

The rain-fall Sunday and Sunday night was two and one-half inches.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

Peaches retail at thirty and apples at twenty cents per dozen in this market.

Three weeks from next Thursday will witness the opening exercises of another year of College labors.

Rev. Campbell, pastor of the Presbyterian Church, made us a very pleasant visit Friday morning.

Prof. Platt lost six dollars by buying his round-trip ticket to the Centennial at St. Louis instead of Manhattan.

Senator Dow and wife, Mr. Mitchell and wife, and a Miss Clarke, visited the different departments of the College last Wednesday afternoon.

Miss Lizzie Pechner has been employed as a teacher in the city schools. She was a faithful and ardent student during her attendance at this Institution.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

Sergeant McFarland has received orders from Washington to discontinue the United States Signal Service Station at this Institution on the 31st inst., and report at headquarters with all the instruments immediately.

Somebody gave the College bell "pertick'lar fits" the night of the wedding. It isn't fair to thus disturb the peaceful slumbers of those who have been married for years, in order to make merry over a recent "consolidation."

But little was done on the horticultural building this week until Friday, owing to the rain on Sunday and Monday which filled the cellar one-fourth full of water. The carpenters have nearly finished shingling the laboratory building, and next week will probably find them at the finishing work on the inside.

We have received the July number of Rounds' Printer's Cabinet, published by S. P. Rounds, Chi-

cago, Illinois. We look upon this magazine as a perfect jewel of typography, all that could be asked for in the way of neatness, beauty, taste and excellence. It is indispensable, and should be possessed by every printer desiring to perfect himself in his profession.

W. P. Burnham, one of the Agricultural College students, has received the appointment of Cadet to West Point from New Mexico. He will report there sometime during next June. Mr. Burnham has worked in this office some, and, besides being steady and industrious, is a gentleman in every sense of the word. We have no doubt he will graduate with honor.—[Enterprise.]

The following items are taken from the last issue of the Nationalist:

Jeff J. Davis, who has worked in our office a couple of years, has purchased a half interest in the Joplin (Mo.) Daily Democrat, and will depart for his new home as soon as we can fill his place. He is the leader of the Cornet Band, temperate, industrious, perfectly trustworthy, and in every respect a good citizen. We very much fear that we shall not be able to satisfactorily supply his place.

Last Saturday, W. C. Stewart received a dispatch stating that a brother he had not seen in over twenty years, nor heard from in five, had been badly injured in a steam threshing machine near Solomon City. In company with Dr. Roberts he went up immediately. The Dr. found his left foot so badly torn and crushed that he was compelled to amputate it about half way up to his knee. When the Dr. left he was quite comfortable, but Mr. Stewart has not returned yet.

The wedding at the home of Prof. and Mrs. Gale, on Tuesday evening, was one of the pleasantest affairs of the season. The house was decorated profusely with evergreens and delicate flowers. They were festooned over the windows and folding doors; were made in crosses and wreaths and decorated the walls; filled the vases and hanging baskets, and helped give the rooms a beautiful appearance. But the fairest flower of all was the lovely bride, Miss Ella Gale. She has grown up in our midst, and her sweet face and winning manners have won the hearts of old and young, and all would have murmured if any less worthy man than Prof. Kedzie had won this beautiful flower and taken her from us.

The ceremony was performed by a class-mate of Prof. Gale, the Rev. Dr. Marston. The bride was surrounded by the ladies of her graduating class and other student friends. A few relatives and friends of the family, and a few of Prof. Kedzie's friends were present; and we are sure the wishes for the happiness of this young couple, who start out on life's journey together, were sincere and heartfelt from each one present.

On Wednesday morning, Prof. and Mrs. Kedzie started on their wedding tour, and will visit his parents in Michigan, then go to Niagara Falls, New York, Philadelphia, and other places of interest, before their return.

MARRIED.

KEDZIE-GALE—At the residence of the bride's father, Prof. E. Gale, in Manhattan, Kansas, on Tuesday evening, July 25th, 1876, by the Rev. Dr. S. W. Marston, PROF. WM. K. KEDZIE, of the State Agricultural College, and MISS ELLA M. GALE.

We extend to the happy couple our best wishes for their abundant success and happiness during the bright future which spreads out before them. May their lives be freighted with naught else than the richest of this world's blessings.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

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Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects imatical to the Kansas Farmer.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf GEO. W. MARTIN, Publisher.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which 95 cents will be paid, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan.

10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography, Household Chemistry. Special course in Chemistry for Post-Graduates. The Laboratories are fully furnished with the best philosophical apparatus and the largest assortment of chemical apparatus and reagents west of the Alleghanies, all of which is for the use of the students.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegaph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Enterprise, MANHATTAN. \$1.00 per year. Patee & Runyan, Publishers. 6-1m

Eagle, Wichita City. Weekly; terms, \$2 per year. M. M. Murdock & Bro., Publishers.

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

Chronicle, Lyndon. Official county paper. Republican; \$2 a year. W. T. Chalfant, Editor and Proprietor. 11-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Herald, Hiawatha. Official paper of city and county. Terms, \$2.00 per year. Burger & Roberts, Proprietors. 6-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

Lantern, Blue Rapids. A 16-column paper, set in nonpareil. No patent outside. \$1.00 a year. Frank Hall, Publisher. 6-1m

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Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

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Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. W. D. Jenkins, Editor. 10-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Gifford & Winter. 6-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

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Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$5; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

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Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

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Printing!—Daily instruction and drill in the work of a First-Class Printer. The Literary Departments offer a thorough education in the construction and use of the English Language, as employed by the Proof-Reader; in Book-Keeping; and in Industrial Drawing, as the best developer of that taste necessarily exercised by every good Job Printer. The Printing Department is well furnished with all the facilities for a speedy mastery of the art of Printing, and is in charge of a practical printer. Besides regular class instruction in printing, the weekly publication of the INDUSTRIALIST by the Department furnishes advanced students the requisite drill in newspaper work.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

MECHANIC'S.

To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

WOMAN'S.

The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of Higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, AUGUST 5, 1876.

No. 16.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Educational Fund.

[Extracts from speech of Hon. Justin S. Morrill, of Vermont, in the Senate, April 26, 1876.*]

WHAT THE NATIONAL COLLEGES HAVE DONE.

These colleges are often called "agricultural colleges," perhaps because here for the first time agriculture obtained equal favor, or even any attention, or because several States have given that name to their institutions as an honorable distinction, or possibly the term may be sometimes derivatively applied, as though it were an absurdity to expect any growth of science and learning from an agricultural college; but while it is true that all sciences related to agriculture are to be included and must be and are taught in these institutions, though not to so great an extent as it is to be hoped they yet will be, there is nothing excluded touching any other industrial, mechanical, or even classical interest. The charter is broad, covering no shams, no inferior work, and if it had been made narrower, these colleges would not only have been less useful but more exposed to narrow and jealous criticisms, and certainly would not have escaped the sneers of those who flout the name of agricultural colleges as a damaging epithet or as a brand of reproach. Ignorantly they have possibly bestowed a watch-word of talismanic power which may both plague and shame the inventors. The clubs of jealousy and passion do not always remain in the hands of those who first bring them into the conflict.

By the law of 1862 the several States were to establish at least one college, and, being unrestricted, they could rightfully bestow such names upon their respective colleges as they pleased, so long as they brought the character of the institutions within the terms prescribed by the act of Congress. Is it not puerile to criticise the public taste about mere names? A college is not specially a "union college" because it has been so named, nor is a college merely a town college, though bearing the name of some town.

Not less unreasonable is it to expect that all graduates of the national colleges must become agriculturists and forever follow the plow. They have the right to do that or anything else they choose; to be artists, mechanics, surveyors, merchants, teachers, lawyers, doctors, or ministers; but whatsoever they are, they will be better for being

*The Senate had under consideration, as in Committee of the Whole, the bill (S. No. 334) to establish an educational fund and apply a portion of the proceeds of the public lands to public education, and to provide for the more complete endowment and support of national colleges for the advancement of scientific and industrial education.

thoroughly and scientifically equipped, and they will also be better able to tender more or less valuable aid to all branches of industry, despising none.

The total number of professional men in the United States, educated or who should have been educated at classical colleges, is only 146,993,* while agriculturists are numbered by millions, and consequently should hold, as they do, prominent privileges in the national colleges; but they neither ask nor hold any exclusive privileges. All the useful arts, all mechanical and industrial employments are hopefully recognized and offered an impartial support. Classical studies are by no means ignored, but are provided for all those who have time to acquire them, and who may have occasion for their future display, and for those who are free from care and solicitude as to present and future maintenance. Scientific knowledge, however, in spite of all doubts, is as sublime and beautiful as any other — so thought Bacon and Newton, and so Franklin and Agassiz — and being also both commonly and grandly useful, it here has a leading position, and what are usually esteemed as elegant and ornamental courses of study, asked for by the present limited class of the so-called learned professions and by gentlemen of leisure, come in as of secondary importance, as they must come, on the field and in the work-shop, in the counting-room and in the factory.

It is proposed to offer the means for a generous and sound education, not without a body for its feathers, and with a steady leaning toward such branches as will assist young men in their work when they reach their ultimate field of duty, and prevent them from forsaking that field because of its monotony, or because of its exclusion from all the graces and attractions of the schools. Is it in vain to seek to embellish the daily life of physical labor with something of the lustre of intellectual discipline? The brain is certainly not to be wholly neglected because it clings to such home-bred allies as bone and muscle, which do more and far better work when wisely guided by a well-trained head.

I find an account of fifteen farms attached to the national colleges, which average three hundred and fifty acres each, and they are rapidly getting to be farms of model excellence, where many of the most valuable experiments are made and where, to some extent, the best breeds of stock are constantly exhibited. What is done is not hid under a bushel. These farms with stock and tools are expensive, and some of the colleges are yet without the requisite funds to secure or maintain them. Several of the States have already supplied these deficiencies. The aid here proposed would enable all to move more satisfactorily in this direction, while it would furnish resources for more efficient work in many other respects.

If the number of college students proposing to be farmers is less than it should be,

*Lawyers, 40,736; clergymen, 43,871; physicians and surgeons, 62,383; total 146,993.

so much the more need is there of creating and cultivating a taste in that direction, and it must never be forgotten that lack of means for long terms of study makes all colleges almost inaccessible to the majority of mankind. It requires also some intrepidity, even for boys inured to labor, to avow that they are preparing to work with their hands, even with skilled hands, as well as with brains, among associates many of whom are rather too proudly setting out to work and shine only with the latter; but the number attending the national colleges with such earnest purpose is much larger than is supposed, or than make any proclamation of their intentions in advance, and the facilities for obtaining all the present available theoretical and technical knowledge of agricultural science has been in most cases, and will be in all, liberally provided.

According to the late census our entire male population, ten years old and over, was 14,258,866, and 5,525,503 of these were engaged in agriculture, besides 400,000 females so engaged. Almost one-half of our whole population, it thus appears, is devoted to agriculture. They have, therefore, in numbers alone the paramount claims to consideration, and beyond such claims there underlies the vital problem of a future supply of cheap food, upon the abundance of which hinge the growth and maintenance of a great people with great and constantly expanding wants. No extent of land can be sufficient without a sufficiency of competent and willing labor. The vocation of farming and husbandry must be made both attractive and lucrative or it will be, as it has been, renounced at every decade by an increasing number of deserters. The pursuit of money-getting alone — all-prevading as the passion may be — is unsatisfactory, and those who furnish food for the whole body of mankind may reasonably demand some share of mental sustenance or at least may demand the crumbs which drop from the tables of the learned.

THE PRODUCTIVE POWER OF FARMS DECREASING.

It is also a fact well ascertained that our soil is being rapidly reduced in its productive power. I have heretofore called attention to this fact as exhibited in every census return since 1840. Our husbandry appears to be based upon the wants of the nineteenth century alone, and refuses to speculate on the wants of the twentieth.

Present profits, not the increased, fixed value of farms, absorb attention. By our too general habit of uncompensated cropping it is plain that we are steadily exhausting the fertility of the land in the new as well as the older States. The wheat region retreats westwardly as relentlessly as the march of some fearful epidemic; in the land of the Puritans they are almost as dependent for corn as they were in the days of Miles Standish, when Indians furnished a scant supply; and now the grasshopper plague seems on the wing, challenging even the westward empire of the farmer.

THE INDUSTRIALIST.

SATURDAY, AUGUST 5, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Linear Studies.

We may embrace under this title all studies that have regard to form, or which use the line in any way to express ideas. This will embrace the mathematics, and also the natural sciences. The place these are to occupy in an educational system, the mode of teaching them, and the extent to which they should be pursued, are questions of grave moment to all. In relation to the first point, there is no better maxim than that given by Dr. Wayland to a young man seeking instruction, i. e., "put that first which you will use most." We have seen that the idea of form enters into all the industrial pursuits. And hence it must be clear that drawing in its various applications must hold an important relation to an industrial life. Through this channel a very large part of the ideas of men in regard to the arts of life are expressed, and cannot be expressed in words. It must be manifest to all that this mode of expression is of vast importance in the various trades. Drawing, then, should have a prominent place in an educational system designed for the people. It is of course essential that every one should know how to read and write, but it is scarcely less important for the industrialist to know how to express his ideas in lines. This qualification should not be attained by accident, but should be taught as a part of the regular system of instruction. The child should be taught to draw as he is taught to read, early in life. The reader and the pencil should go together, and hence free-hand drawing, at least, be made to hold a prominent place in a common school education. This should be no more made an optional study than reading or spelling, but, from the very nature of the work, should be regarded as elementary and essential in all common schools. Every one who lays claim to even a common school education should show some proficiency in this direction.

By this acquirement, early in life, the pupil is far better prepared for the study of the natural sciences and the mathematics. Their practical applications will be more apparent, and far more readily understood. The applications of the line in the study of botany, entomology or mathematics are almost numberless. The more thoroughly the student has mastered the use of the line, the better is he prepared to grasp the principles of natural or mathematical sciences. Not only this, but it is possible to study the sciences more from the linear side than has hitherto been done. Every one can see how

important a plant or a flower is to the study of botany, and how much interest is secured by the presentation of forms for study in place of mere names. Now we only take the line to measure the plant. Facts are more readily and thoroughly acquired in this way. The same principle applies to the entire round of natural or mathematical science. This will involve the constant use of the pencil through almost our entire course of study. The power to clearly delineate forms, not conventional, but true to nature, should be required as an essential part of an industrial education. This will involve an exactness and minuteness of observation which is now seldom seen. In the examination of any object in nature or art, we should be led to consider first of all wherein that object differs from every other object; we should be led to take in at the very first glance its distinctive features.

This power to thus analyze the objects of nature, or to see the individual parts of every object at once, constitutes one of the most important elements of the higher culture. It is a misnomer to call a man educated who cannot individualize the distinctive features of nature about him. This has much to do with the development of a correct taste, and hence, must play an important part in what has been termed a broad and liberal culture. We might urge this kind of culture from the stand-point of æsthetic enjoyment, and from its influence upon society, but prefer to regard the culture of taste in its relation to successful industry. The conception of the beautiful and the fitting most here hold a high place, and will in most cases make up the difference between success and failure in life.

If we apply this thought to cabinet-making, carving, engraving, up-holstery, carpentry, tailoring or mantua-making, we see that very much depends upon correctness of taste. This is something that rises above mere mechanical skill, and commands in the market a much higher price. We are to remember then, that a clear conception of the beautiful and the fitting is not only a source of exquisite pleasure, but a pledge of wealth to the worker. Let it not be understood that we urge here merely a shallow acquaintance with the practical applications of science. This is by no means encouraged nor is it at all implied. We may safely assert that a thorough acquaintance with science is only attained by the practical road.—[Prof. E. Gale.]

What was once laid down in our school geographies as the "Great American Desert," will yet produce wheat enough to feed the world; and it is worth a trip over that immense country to see the evidence that proves this assertion.—[Bedford (Ind.) Gazette.]

The Wells Fruit Farm.

Those who doubt the possibility of success in fruit culture, should visit the fruit farm of W. Wells four miles east of Manhattan. Mr. Wells thinks his apples will not fall short of thirty-five hundred bushels. About one-half of his orchard was planted in 1865, while a small number was planted in 1860, 1863 and 1864. Much more than one-half of the apples are upon the trees planted in 1865, probably owing in part at least to a better selection of varieties. The thought that presents itself at every step through this orchard is this; that the success of all fruit culture depends very largely upon the judicious selections of varieties. Mr. Wells pointed out trees planted in 1865, that four years ago yielded him sixteen dollars each, while there were many others planted at the same time that had never given him a dime's return. This is the experience of every orchardist.

There is money in the planting of some varieties of apples, and there is pure loss in the planting of others. What to plant is a matter of much moment. Those who propose to plant largely another year will find it to their advantage to study the matter now when trees are in fruit. If we will only take the trouble to profit by the experience already acquired, it will save millions to the State in a few years. The voted apple list published in this paper a few months since, if carefully studied will save many thousands to our orchardists and to the State. That list contains the combined experience of our best men, and those who will study it carefully before selecting their varieties will be amply paid.

DEAL WITH HONEST AND CAREFUL NURSERY-MEN.

Mr. Wells pointed out fifty trees purchased for a certain variety. They prove after years of waiting to be something else of no value. This may have been a mistake of the nursery-man, but, to say the least, an unfortunate one for Mr. Wells. If a deliberate deception there should be some way to punish it. We cannot be too careful in guarding against mistakes of this kind. The wind-break about this orchard is also a matter of interest. While the larger trees protect the orchard, the double hedge protects the fruit in the main, though a hole in the hedge near one corner suggested the idea, that if the way of the transgressor had not already been hard, it might be the next time he came through on all fours.

The white or gray willow is not here a success. The black locusts have all been cut down. They yielded a large number of posts and are growing up rapidly again, and will grow to the size of posts probably before suffering materially from the borers. Box-elder, ash, hackberry and red cedar are all doing well.—[Prof. E. Gale.]

THE INDUSTRIALIST.

SATURDAY, AUGUST 5, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:40 A. M.
Going West.....	3:52 P. M.

FREIGHT ARRIVES.

Going East.....	12:25 A. M., and 12:55 P. M.
Going West.....	6:15 P. M. and 6:10 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

W. C. Johnson and Herbert Powers made us a very pleasant visit Thursday afternoon.

The trees that were planted to shade the walks in the College grounds are doing well. There is hardly a failure among them.

A young man named Hopkins arrived this week and has gone to work about the College. He proposes to attend school here next term.

Al. and Wilber Brous, former students of this Institution, started for the Centennial on Wednesday morning with a horse and buggy.

The masons on the horticultural building have the cellar walls finished, and the carpenters will soon begin to lay the joists for the first floor.

The meteorological report will be dispensed with, at least until school begins. So "blow ye winds, and crack your cheeks," while you have a chance.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

Prof. Shelton is expected to return about the 10th inst., and the various tribes of quadramania are preparing their proboscides for a general salute upon the advent of their lord and master.

After a very practical illustration of the curse pronounced on Adam and his children, the harvest on the College farm has been finished, and the grass and grain crops are all gathered.

The boys on the farm have commenced plowing the ground for fall wheat. They are at work on the piece of land, lying immediately west of the College, from which the barley has just been harvested.

Miss Lucinda J. Gove, formerly a student of the Agricultural College, was married to a Mr. Hobart, of Boston, on the evening of the 27th ult. We extend to the happy pair our cordial congratulations.

The plastering in the main College building has been completed, and the workmen will begin work immediately in the laboratory building, as the lathing and the laying of the floors in that building are well-nigh finished.

Last Sunday afternoon Prof. Gale lectured before a large Sabbath School audience, on the Jewish temple. His very fine and vivid description was well illustrated by an excellent and beautiful model of that wonderful structure.

The colored element of our city made a general pilgrimage to Wamego last Tuesday, to celebrate their emancipation. Many of them did not return until the next morning, and we should judge by the glistening of their ivories that they had anything else than a sorrowful time.

A remarkable Gale sprang up in this vicinity yesterday. It swept along the line of the Kansas Pacific at the rate of twenty miles an hour, but when last heard from was verging toward the Indian Territory. We wish the Professor a pleasant trip.

The laying of the rock upon the sidewalk between the city and the College is being pushed forward rapidly. The length of this walk will

make it a very appropriate promenade for star-gazing and moon-admiring couples. A want very long felt by those astronomically inclined.

Several young ladies called on us last Tuesday. If the angels spoken of by Stewart, were as silent as these, we see no particular reason for his blowing. Perhaps they were struck dumb, however, by the close contemplation of our "lokle editor," for he certainly looked alarming on that occasion.

The ability of the weather to take care of itself has been well demonstrated since the removal of the Signal Office. If anything, it has been more moderate since the gallant sergeant let go the reins. Perhaps the gentleman had a partiality for a hot climate. At least that is the supposition in this neighborhood.

Only three weeks now until school begins. Chemical students will be able to study with rare advantage the coming year. Among the increased facilities afforded, there will be seen upon the shelves a new and remarkable re-agent which the Professor has but lately secured. According to his opinion it beats anything he saw in Germany. He considers it of great practical value. It is labeled "Matrimonial sweets," and the whole modus operandi connected with it will be presented to the young ladies and gentlemen in special lectures.

It seems that the INDUSTRIALIST had to be personally represented at the Centennial. Supt. Stewart has therefore taken his flight for the city of brotherly love. He left the local pen in our hands, but if he had known that we are an escaped lunatic from an Illinois asylum, he would probably have trembled for the reputation of his sheet. We believe, however, with Mark Twain, that the less an agricultural editor knows about his business the better he will succeed; so even if we are compelled to wear a straight-jacket at times, we hope to preserve the subscription list unimpaired.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder
Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The Fall Term begins Thursday, August 24th, 1876.

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

Gardening for Profit!—Instruction and Drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening. Kansas Forest Culture a specialty. Seventy acres devoted to experimental apple, pear and peach Orchards, Vineyards, Nursery, and Gardens.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects injurious to the Kansas Farmer.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order. 30-tf GEO. W. MARTIN Publisher.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which 95 cents will be paid, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography, Household Chemistry. Special course in Chemistry for Post-Graduates. The Laboratories are fully furnished with the best philosophical apparatus and the largest assortment of chemical apparatus and reagents west of the Alleghanies, all of which is for the use of the students.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegaph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Enterprise, MANHATTAN. \$1.00 per year. Patee & Runyan, Publishers. 6-1m

Eagle, Wichita City. Weekly; terms, \$2 per year. M. M. Murdock & Bro., Publishers. 6-1m

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

Chronicle, Lyndon. Official county paper. Republican; \$2 a year. W. T. Chalfant, Editor and Proprietor. 11-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Herald, Hiawatha. Official paper of city and county. Terms, \$2.00 per year. Burger & Roberts, Proprietors. 6-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

C

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. A. G. McBride, Editor. 10-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Gifford & Winter. 6-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

Leader, Cottonwood Falls. Official paper of city and county. The Leader is not a real estate paper. \$1.50 per year. W. A. Morgan, Editor and Proprietor. 8-1m

Tribune, Lawrence. Daily, \$8; weekly, \$1.50 per annum. Independent Republican. Established Oct. 15th, 1854. John Speer, Editor. Speer & Covel, Publishers. 11-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. J. M. Cavaness, Editor. 6-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkinson, Editor and Proprietor. 9-1m

Blade, Wamego. Don't read this until you send for a sample copy of the Blade, the leading local paper of Pottawatomie county. R. Cunningham & Co., Publishers. 6-1m

Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$6; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

Independent, OSKALOOSA. Established in 1860. Is in a flourishing condition, with a steadily increasing circulation. Edited and published by J. W. and F. H. Roberts. 6-1m

Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis." \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor. 11-1m

Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will D. Jenkins, Editor and Proprietor. 8-1m

Monitor, Jewell Centre, \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14-1m

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

Dispatch, Hiawatha. In its seventh year. Official paper; organ of the staunch old Republican party. Thoroughly established; home print. \$2 a year. A. N. Ruley, Publisher and Proprietor. 8-1m

Gazette, Enterprise. A 40-column quarto. Independent Republican. Devoted to the financial interests of the publisher and the general good of the people. V. P. Wilson, Editor and Proprietor. 10-1m

Citizen, Fredonia. Established 1870. Circulation 328 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Journal, La Cygne. Saturdays. Republican. 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

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Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc.

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KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,

President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, AUGUST 12, 1876.

No. 17.

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Address A. A. STEWART, Manhattan, Kas.

Educational Fund.

[Extracts from speech of Hon. Justin S. Morrill, of Vermont, in the Senate, April 26, 1876.*]

THE PRODUCTIVE POWER OF FARMS DECREASING.

The census of 1870, notwithstanding the evidences of a rapid development of wealth and population, discloses some unwelcome facts. With a much larger acreage and millions more of population, as compared with 1860, there was only a small gain in wheat, oats, butter and potatoes, while there was an absolute diminution, incredible as it may appear, of cattle, swine, corn, rye, rice, tobacco, cotton, cheese, sugar and molasses. Improved implements now enable farmers to cultivate double the quantity of land cultivated by their fathers, one man with the reaper doing the work of ten men, and thereby securing with less labor greater present profits; but by this grasping, broad-gauged husbandry, by too frequent rotation of crops, by too little reliance upon manual labor and home-made manure, and the dire exhaustion which follows the exportation of cereal crops, they also secure a larger deterioration of the soil, and the general crop per acre year by year grows perceptibly less. Our fast and thoughtless machine-farming makes us forget that the earth can ever grow old and unfruitful.

Surely it will not be improper to give some heed to the lesson brought to our notice by such ominous and irrefutable facts. The only amendment possible is through a better and more scientific treatment of the soil as well as a higher and better treatment of those who are to be its future proprietors. Is there any mode by which that result can be more generally and successfully promoted than through the establishment of these national colleges? Certainly none are offered, none are visible, at home or abroad.

Let it be borne in mind that the products of farms depend not more upon their fertility than upon the intelligence of their occupants. Ireland is a land of great fertility, but has not been overstocked with schools; while Scotland is far less fertile, and has a much rougher climate, but it has long been famed for the universality of its schools. The result is that Ireland has not been free from famine, and her population departs in droves to other lands; while in Scotland,

*The Senate had under consideration, as in Committee of the Whole, the bill (S. No. 334) to establish an educational fund and apply a portion of the proceeds of the public lands to public education, and to provide for the more complete endowment and support of national colleges for the advancement of scientific and industrial education.

O'er a' the ills o' life victorious—

you not only cannot starve a Scotchman, but the population thrive by intelligent industry and is constantly on the increase.

Notwithstanding the immense interest in farms and farmers, the General Government, possibly still the largest land-holder of the world, has yet done little, very little, for agriculture, even less than many European governments. Only 15,000,000 acres, all told, have been granted under the land grant to the national colleges of 1862, and this covers all that has been done in behalf of a higher education, not only for the millions engaged in agriculture, but for the 2,707,421 persons engaged in mechanical, manufacturing and mining pursuits. Commerce, with its light-houses, harbors, breakwaters, buoys, coast-surveys, and naval protection, has sometimes absorbed more in a single year than all that for eighty years has been done and all that it is now for coming ages proposed to do for agriculture.

I begrudge nothing to commerce; but agriculture and the mechanic arts deserve a more liberal recognition, and those employed in these pursuits, as worthy as the worthiest, can have but little respect or tenderness for any fallacies or grim humors brought forth to exclude their claims. The grand extent and dignity of agriculture cannot be safely or wisely ignored by any men or any parties in America, where it is probable that more real farms are owned and practically worked by the owners, than in all of Europe. Tradesmen may fail, commerce may suffer shipwreck, railroads may bring their owners and creditors to grief, banks may stop payment, but the farmers never stop; they face all vicissitudes of trade and of adverse seasons, face even sneering neglect, and, standing to their noble but unambitious calling, are never less than the backbone of the State. Though the world turns round, though the flood comes and the winds blow, every farmer, planted on the deep foundations of his own homestead, feels that beyond all peradventure this is mine.

IMPORTANCE OF SKILLED LABOR.

Perhaps there are few questions of higher moment than the future of our industrial and mechanical trades. The throng of foreign artisans and mechanics annually coming to our shores are eager for places at the head, and our own men must be made superior, or at least equal in skill, or they may be driven from their employments, and perhaps from their homes. In many departments of industry the longer experience of Europe, and more regular apprenticeship, gives to their best workmen some rather formidable advantages. This, with the imported barbarous despotism reigning over our "trade unions," restricting the number of apprentices among the masters, not unlike the tyranny of wild horses, which kill of male colts, is tending to cripple the progressive growth of natural mechanics, and the number of young men now seeking to learn trades is unnaturally circumscribed. The only remedy for this is a higher stan-

dard of technical education for our own workmen, who should, with all their in-born aptitudes fully developed, everywhere aim to be the best, and no more be outstripped in the quality of their work than they are in the quantity.

A BENEFIT TO ALL OTHER COLLEGES.

A general advance in the scholarship of farmers and mechanics, of merchants and manufacturers, or of the population at large, cannot prove detrimental to men in the so-called learned professions or to literary colleges. All these would be stimulated beyond a doubt to make a greater advance, and to take up a higher position than that now held, as there is indefinite room; but this should be hailed as a high recommendation, one of the exalted benefits to accrue from the establishment of the national colleges, and could not be construed as incompatible with the standing and prosperity of existing literary institutions. If any officers among the latter should anywhere exhibit scepticism and exceptional jealousy respecting a higher education for the industrial population, as very few have done and less will do, it would justify the charge, not entirely new, that they are too much actuated by either monastic or aristocratic bigotry, and deserve pity for their palpable lack of sympathy with popular institutions. I feel sure that no true American will ever prize his own education higher because there are others who cannot get it; and the purpose here is to increase the usefulness of the colleges we have created, not the demolition of the old.

AMERICAN INVENTORS.

Among the conspicuous evidences of comparative intellectual and industrial activity of the people of different States, may be reckoned their inventive power, as exhibited by the number of original patents annually obtained for new and useful inventions. These require elaborate thought, intricate and dexterous combinations of ideas, and the practical applications of scientific principles. Wherever enlightened and active industry prevails, the people will be found to have a decided aptitude for devising and constructing labor-saving instrumentalities — confirming Franklin's humorous definition of man as "an animal who makes tools" — though not so much for the object of saving labor as for increasing the rapidity of production and improving the quality of the product. It is the triumph of brain-power, which once put in motion by schools and colleges never stops, but keeps on to the end of life. One success is an incitement to fresh ventures and the inspiration which leads others to kindred efforts. Perhaps we have no reason to be dissatisfied with our present record when contrasted with that of other nations, as it will show four times the number of patents annually issued, compared with Great Britain, notwithstanding that no applicant there is refused, questions of interference being left to the courts, while here nearly one-third are rejected for reasons of

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, AUGUST 12, 1876.

JNO. A. ANDERSON.
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Vilfa vaginæflora.

The grass question is an important one in Kansas. The original prairie grass rapidly disappears under the short cropping of sheep and cattle. The buffalo grass, once so common here, has given place to other kinds of wild grasses, and these in turn have rapidly given place to weeds. Fenced pastures, it has been thought, would soon be of no service, as the wild grasses could not endure close pasturage. We cannot disguise the fact that the wild grasses have thus rapidly disappeared, and in their place have come the unsightly weeds. Efforts at seeding with the ordinary tame grasses have not been attended with that uniform and permanent success which we all have desired to see. In many minds it has become a serious question, what we are to do in the future. Some are looking to alfalfa as a substitute for prairie and the ordinary tame grasses. We have reasons from present indications to hope much from this grass, but it is yet an open question, whether it will endure our changeable winters, and also whether it will stand the treading and cropping of cattle and sheep for a term of years in our soil. Even if it fails to furnish pasturage it certainly will be of great value for soiling and hay, provided it does not winter-kill.

We wish to call attention to a substitute for the disappearing grasses that nature herself is providing in the very fine annual grass, which is showing itself everywhere about our towns. If one looks among the weeds, in an old traveled road, he will find this grass in great abundance. All it wants in order to make a vigorous growth and a thick mass of green is room. Give it room and it will grow almost anywhere, and on any kind of soil. It matters little how poor, but it does not scorn a rich soil, for it will grow most luxuriantly upon our richest bottom lands. We have seen this grass transplanted in small tufts upon the clay thrown out from a cellar, where other grasses had repeatedly failed, and in a few weeks the whole was covered with a beautiful carpet of green. The fact that this grass is usually found on hard and dry spots where no other grass will take root, has led to the supposition that it really was of no avail anywhere else, but the experience of two or three years past disproves this, and gives us to understand that we have a better friend in the Vilfa vaginæflora than we had any reason at first to suppose.

When this grass has taken possession of the soil it furnishes an immense amount of

food; and if it can be made to retain its hold upon the ground from year to year, will be of incalculable value to the State. We shall probably materially aid this grass in getting possession of the ground, by mowing the weeds which invariably follow the original prairie grass. The most serious objection to this grass is the fact that it is an annual, consequently cannot furnish early spring feed. To this can only be said, where is the grass that will answer our purpose better? This we have, others are only problematical and in the future. — [Prof E. Gale.]

Plants in Rooms.

"J. E. J. asks whether plants in the house, especially in sleeping apartments, are advantageous or disadvantageous. The question is accompanied with a clear statement of many of the more important facts bearing upon the matter, but the writer appears to be somewhat disturbed by existing prejudices, and by a late magazine article, and asks whether there are any recent observations respecting the influence of plants at night upon the air of rooms.

The contributions to the subject have not of late been numerous or very important, and do not in the slightest degree weaken the force of the evidence already in the case. In Germany some experiments have been made by Muller; in France, by Boehm, by Deherain and Moissan, the latter concluding that the amount of carbonic acid evolved by leaves in the dark is not far from that breathed out by the lower animals, such as frogs, lizards, May bugs and silk worms. The respiration of plants is exactly like the respiration of animals. In both oxygen is consumed and carbonic acid thrown off. Assimilation, which takes place only in sunlight, and is accompanied by the evolution of oxygen, is quite another process, and must not be confounded with it. In the investigation just spoken of, equal weights of leaves, frogs, &c., were compared. Later, Mayor and Wolkoff examined the relation of true vegetable respiration to light and the growth of the plant in length. They decide that the effect of light on the respiration of plants is inappreciable, and that growth in length is a phenomenon which has not much, if anything, in common with respiration. Nearly the same results have been reached by Cornewinder. In short, it is understood that respiration, although masked in the sunlight, goes on all the time; that its relations to growth in length are remote, to say the least; that the amount of carbonic acid evolved is very small. Now, do any of these experimenters tell us how much is evolved? Deherain and Moissan give some figures which may be of interest. At a temperature of 60 degrees Fahrenheit, or thereabouts, 100 grams of green leaves (tobacco, dock and mustard) kept in the dark, yielded in ten hours from one-sixth to one-fifth of a grain of carbonic acid. From this it is easy to see that Dr. Gray's statement, made not very long ago in the Tribune, cannot be far out of the way, namely, that a common night lamp, or an infant, will consume more oxygen and give out more carbonic acid than a large number of plants kept in a sleeping room could." — [N. Y. Tribune.]

KANSAS makes the finest display at the Centennial of any State in the Union.

Kansas.

Kansas is purely an agricultural State, and every man has his farm. Every lawyer, doctor, banker and merchant, even clerks in stores have their farms. You meet a business or professional man and expect to hear him talk of business, and instead, the first subject he broaches, very likely, is his farm. My farm! I am doing so and so on my farm. If you are a stranger, he always asks if you are going to farming. You meet a clerk and he tells you he has been out to his farm. I met a man to-day (a banker) whose hands were as white and as soft as a girl's, his person clothed in broadcloth, who told me he was harvesting. He has forty acres of wheat, forty of corn and thirty of oats. All this goes to show how important is the business of agriculture, and how highly it is esteemed by the people in general. All other kinds of business, or as many as can be in a country of this kind, are represented and carried on, but are really dependent on agriculture which is considered the basis of everything, as a large proportion, in fact nearly all of the people, are concerned either directly or indirectly in farming. And being thus engaged in a common pursuit, the people are brought more together in business and on a more equal footing.

Having common interests there is a more general equality among people here than is seen at the East. It would be well for New England if more of this feeling of equality between farmers and people of other professions could exist, and if farming, as here, was exalted to its proper significance among other callings. If such were the case, there would be no mourning over depopulated rural towns, our need of educated men counseling youths not to leave the farm. Let them stay on the farms themselves and help to ennable the calling of agriculture, and lift the farmer up to his proper level by showing him the importance and honor of his profession. The farmer himself has a part to perform in making himself intellectually the peer of his friends in other callings, and giving to his work that dignity which energy, skill and knowledge can alone impart. — [Ex.]

Rye for Winter Pasture.

We have been in the habit for many years past of sowing a few acres of rye for winter pasturage, and with the very best results. No kind of pasture pays as well. If sown now, or during the month of August, or even September, it will produce an abundant yield of delicious herbage for all kinds of stock in winter. It is especially valuable for the calves and colts and lambs and milch cows, and indeed for all kinds of stock. All you have to do is to plow the ground and sow the seed. They will pluck it. You need not harvest it for them. The green rye keeps the bowels open, the blood in good condition, and the animals growing with great rapidity. If the corn field is so that it can be pastured, nothing will pay better than to sow it in rye. Put a man on a horse with the seed bag, and let him sow the rye. If a heavy rain soon falls, or moist weather follows, the rye will come up without running through the cultivator; but in case of dry weather the cultivator must be used to cover the seed.

There is nothing in which western farmers are more lacking than in supplying winter pasturage to keep their animals healthy and in growing condition. — [Coleman's Rural]

THE INDUSTRIALIST.

SATURDAY, AUGUST 12, 1876.

TIME-TABLE OF THE K. P. RAILWAY. PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

The next term of the Agricultural College begins Thursday, August 24th, 1876.

Flies? Already well supplied, thank you. No more just at present, if you please.

We have had an increase in our family in the shape of a litter of Essex swine. All doing well.

The forges are being built in the blacksmith shop, and a stone foundation is also being put under the building.

The sidewalk connecting the industrial with the main College building is being extended to the east end of the latter.

The weather is very agreeable. Thursday especially was quite refreshing, and the night following we had an acceptable rain.

Prof. Platt has favored the Nationalist with a communication from the Centennial. Hope he will not forget the INDUSTRIALIST next time.

Prof. Ward returned Thursday evening. We gladly welcome him home, for we were feeling quite forlorn, having been deserted by all the faculty.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

There is a small "pup" in this vicinity, who, like many other youths, is troubled with the "big head" just now, but he is expected to grow out of this in course of time.

The workmen are engaged on the ceiling of the carpenter shop. This has long been needed in order to deaden the sound which constantly disturbed the classes in the rooms above.

Mr. S. M. Ward, a nephew of the Professor, is here from Ellenville, N. Y., and will attend the College the coming year. Mr. Ward is a superior gentleman and will secure many friends.

The city authorities have lately been waging war on the weeds growing on the "flats," between here and town, and students will thus escape the danger of getting lost in those jungles when school opens.

We are indebted to the State Board of Centennial Commissioners for a circular descriptive of the Kansas exhibit, and also a clipping from the Philadelphia Telegraph, presenting the same. Accept our thanks.

We take it all back. There are really but four animals on the farm belonging to the order of quadramania. They are favored with rather long ears, and it will be remembered that A. A. tried to shake hands with one of them not long ago.

Supt. W. C. Stewart has been putting the telegraph lines in order. On Monday he was round here, "clearing his decks for action." All is silent yet, but the drummer will soon beat "to arms," and then the deafening click, click, click, will begin.

A fire occurred at Prof. Gale's on Wednesday between the hours of 9 and 10 P. M. It was, however, soon extinguished, and no serious damage resulted. Strange that a fire did not break out before. There was so much "spark" around there all summer.

Angels were scarce this week. Wish we knew

the kind of terrestrial food the dear creatures eat so that we could use some for bait, for we have been thinking of catching one of them alive and keeping it for a pet. Wonder how clarified syrup along with extract of honey-suckle, June roses and melted rainbows, would answer.

It is to be doubted if a mule receives any particular benefit from being connected with an Agricultural College. We lately had a desire to get on the back of one of these animals and made a jump for that purpose, but Mr. Mule squared off and looked rather surprised. Facing him we took hold of the bit but Mr. Mule failed to coincide with us in our plan. There was a feeling of warmth about our heart just then, in fact we were getting excited. It was no use; a mule is naturally a low animal, and "education" will never teach him better.

At the Presbyterian sociable which met on Thursday evening of this week, we had the pleasure of witnessing an entertainment which was both rare and interesting. A little niece of Mrs. Caldwell, of this city, who is but six years old, favored the company with a few recitations, among which was "Over the hill to the poor-house." This latter poem was rendered in the costume of the old outcast lady, and the manner, the tone, and the spirit displayed by this youthful declaimer not only captivated all present, but convinced us that she possessed the ability to put many an older pretender to the blush.

Dr. Patee.

20-tf

The Annals of Kansas, by Daniel W. Wilder
Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets.

16

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Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

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English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Printing!—Daily instruction and drill in the work of a First-Class Printer. The Literary Departments offer a thorough education in the construction and use of the English Language, as employed by the Proof-Reader; in Book-Keeping, and in Industrial Drawing, as the best developer of that taste necessarily exercised by every good Job Printer. The Printing Department is well furnished with all the facilities for speedy mastery of the art of Printing, and is in charge of a practical printer. Besides regular class instruction in printing, the weekly publication of the INDUSTRIALIST by the Department furnishes advanced students the requisite drill in newspaper work.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

Gardening for Profit!—Instruction and Drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening. Kansas Forest Culture a specialty. Seventy acres devoted to experimental apple, pear and peach Orchards, Vineyards, Nursery, and Gardens.

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Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

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School District Bonds.—Several thousand dollars in School District Bonds wanted, for which 95 cents will be paid, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan.

10-tf

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

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Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

[Concluded from first page.]

conflict, lack of priority or inutility. It is even possible that we are as widely known abroad for our Yankee inventions as for anything else.

The State of Michigan, largely agricultural, is young and vigorous, just out of its teens, and yet in 1873 there were 356 inventors, or one annually to every 3,326 of her people; but South Carolina, one of the old "thirteen," unfortunately deficient in schools and colleges, had only 25, or one to every 28,224 of her people. The State of Connecticut, crowded with manufactures and the mechanic arts, leads off in the same year with 622 inventors, or one to every 864 of her people; while in New Mexico, nearly barren of educational institutions, there was only one patent issued among a population of over 91,000. Michigan and Connecticut are blest, not only with the best system of common schools, but with higher institutions of learning among the foremost in the land. These States stand in the front rank as to wealth and education, and there can hardly be a better illustration of the fact than the number of patents annually won by their people. They are constantly surprising their contemporaries by something new, that will lighten labor and benefit the world.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegraph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

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Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibberts & Co. 16-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

Courier, Columbus. Leading paper in Cherokee county. Politically, Republican. S. O. McDowell, Editor and Proprietor. 14-1m

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

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Tribune, Lawrence. Daily, \$8; weekly, \$1.50 per annum. Independent Republican. Established Oct. 15th, 1854. John Speer, Editor. Speer & Covell, Publishers. 11-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. A. G. McBride, Editor. 10-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkins, Editor and Proprietor. 9-1m

Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$5; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis." \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor.

Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will. D. Jenkins, Editor and Proprietor. 8-1m

Monitor, Jewell Centre, \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

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Citizen, Fredonia. Established 1870. Circulation \$28 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Journal, La Cygne. Saturdays. Republican 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

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To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

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The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR.—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to
J. A. Anderson, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, AUGUST 19, 1876.

No. 18.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Use and Beauty.

[An oration delivered by Miss Esther E. Evans, of the Alpha Beta Literary Society, at the Under-Graduates Exhibition, of the Kansas State Agricultural College, Tuesday evening, May 16th, 1876.]

Man sustains a close relation to the outer world. Not only is he dependent upon it for his physical life, but there are other relations which he sustains to it. The world was made for man, and God has given him a beautiful home. The fertile hills and valleys, the broad prairies are for man's good alone; and not only for his physical good, but they are invested with a beauty that speaks to his soul in living words. Yet how many fail to hear its voice. They see only the use, and never know the beauty. To them the fertile valleys and prairies are only of benefit for products that may increase their wealth; the beautiful rivers are only useful in fertilizing the land, and for purposes of navigation, and thereby commercial wealth.

And this is truly their use, but they have a second value no less important. Our souls need sustenance just as much as our bodies, and for this nature was given a surpassing loveliness. Even those things most common and most abundant are arrayed in forms of beauty. The fields of grain, the trees laden with their fruits, tell us of something more than mere supply of physical needs. Why has the Great Author given nature this wondrous beauty, this infinite diversity of form, this perfection of harmony? Why has He given to every hill and valley, every tree and flower a form of beauty? Why has He hidden such mines of beauty in the earth, and spanned the heavens above in such dazzling splendor? Surely He intends the life of man, His latest and best work, to be made beautiful.

We are not to forget the useful and seek alone for the beautiful, but to remember the harmony of the two as we find it in nature. This life to toil is given, but if we were more thoughtful of the needs of our higher nature, and would strive to gather the beauty into our lives that we find in such prodigality in nature, there might not be so many dreary homes and tired hearts, and the rest and strength we would find would make us better able to carry the burdens we find it necessary to bear. I have seen many whose surroundings were cheerless, and whose lives stretched out before them like a sandy desert wherein grew not a tree or flower. Life to them was made up of hard reality with naught of loveliness or beauty; and yet it is free for all, for God never creates a soul without provision for its needs. There are two houses just across the way, both indicating a life of toil and

poverty. As we enter the one we find a cheerfulness and attraction that make us forget its poverty, and though household comforts are few yet there is a blending of use and beauty that betoken a hand in sympathy with nature. As we enter the other, though all is scrupulously neat, yet there is a dreariness that repels us. There is a lack of the refining influence of beauty, and we turn away, feeling a dread of poverty.

Yet life need not be hard and cheerless because of this. We have seen simple cottage homes blossoming with beauty, possessing as great an attraction and giving as true a joy as elegant homes of wealth. Wealth brings us many pleasures, but we sadly mistake when we live in dreariness and discomfort, spending our strength and energies in the hope of obtaining its pleasures, leaving our souls to starve for the food that is so easily obtained. Many homes are models of convenience, but they wait for wealth to bring them the refining influence of beauty. It is our duty to make our surroundings beautiful, to bring into our lives this harmony of usefulness and beauty that we find so abundant in nature. Look at the homes of the ancients; in what rare forms were wrought even the commonest articles of use. They copied largely from nature, and it brought to them elevation and refinement.

Examine the tiniest flower that grows; what wonders are contained even in so small a compass. The delicate petals are shaped and tinted by a marvellous hand. Their fragrance sweeps over our hearts, purifying and softening them. Thoughts sweet as heaven they inspire in us, and we linger long, spell-bound by their magic influence. A little rivulet catches the eye, and we listen to the melody of its murmuring voice until our hearts are tuned to song. The lessons of nature are replete in beauty; they are sermons full of power telling us of the invisible world.

Thus our Father is ever speaking to us, even in the simplest works of his hand, and they are grand and glorious words bringing to our hearts blessing and hope and joy; words that never deceive us, that never lead us astray, but always onward and upward. Practical utility is the cry of to-day and it leads rapidly toward materialism, but far above all may be heard this pure voice of nature, and in clear and thrilling tones it proclaims the parallelism of use and beauty. May we open our hearts to its teaching, and may it find there a response, assured that we shall thus be led toward the Infinite.

Brains and Method in Farming.

Could talking or writing have availed anything, enough has been said long ago to have depopulated the towns and established an impassable blockade for bread and meat around the Cotton States. We do not propose now to waste ink arguing the point. Our purpose is, if possible, to aid those who are content to stay in the country and work. We believe that farming properly conducted does pay, that its profits are reasonable and sure, when brain and brawn

co-operate cheerfully, intelligently and energetically; but we believe just as fully, that speculative, careless, routine, uncalculating, unscientific farming will not pay, but will, with fearful speed, make bankrupts of those who practice it. Illustrations of the latter proposition abound on every side—those of the former, whilst far from being so numerous, may be seen in almost every community—a few farmers standing head and shoulders above the unthinking crowd.

Ever since the war the land has resounded with complaints of labor; with more justice it should be of lack of brains. Brains to plan, brains to calculate, brains to execute; brains to decide what crops will pay, how much labor will pay, how much and what manures will pay; what rest should be given to the soil, what restitution made for its depletion by crops, what rotations will pay best and longest maintain the fertility of the soil; what stock will pay best, and most economical modes of feeding. These and hundreds of other like questions call most loudly for strong, educated, thoroughly-trained brains. Away with the practice of making tenants or partners of negroes, and delegating to them the direction and management of our Southern agriculture. What would be thought of a merchant or a contractor who would put negroes in charge of his business? Does farming require less judgment, less perception, less tact than buying and selling goods?

Another proposition, palpable to every reflecting man, is that every one's operations should be brought sharply within the limit of his means. Credit at all times is hazardous; during periods of great financial disturbance it is almost invariably disastrous. Creditors then become unusually clamorous, and property brings little if forced to sale. But what should be done if one is already in debt, it may be asked. Sell, if need, be everything above what is needed to run a one-horse farm, and start from the bottom. Show yourself honest and you will not need homestead or other laws to protect you. Creditors are exacting because they fear dishonesty. When one firmly and cheerfully resolves to pursue a course like this, it is surprising how little is required to run a farm and support a family till a crop is made. A cow and a garden will keep starvation a long way off. Just think of the quantity of Irish potatoes that can be raised on a little patch of ground, how early in the season they are available, and how nearly this tuber can supply the place of bread. While urging this heroic treatment, we hope few will need it. We are sure, however, that very nearly all our farmers would be bettered by more or less contraction of business, selling enough to pay off old debts, and then adhering firmly and inflexibly to the maxim "pay as you go."—[Southern Cultivator].

Our observation has led us to believe that the soil of Kansas is the most productive in the world—producing crops of every description in prolific abundance.—[Elkhart (Ind.) Observer].

THE INDUSTRIALIST.

SATURDAY, AUGUST 19, 1876.

JNO. A. ANDERSON.
Managing Editor.

J. H. POLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

The Ground Plum.

The writer of this has great faith in nature's home productions, believing that the best policy for the plant grower is always, when possible, to patronize those home grown plants which have for ages withstood the rigors of our climate, rather than to attempt the cultivation of the less hardy foreign species. The teachings of geographical botany cannot be ignored with impunity. Nature knew what she was about when she put into the Iowa prairie soil the seeds of hardy plants, and kept the tender ones for milder regions. But there are other reasons why we should cultivate native species. Nearly all our farm and garden plants were brought from Europe or Asia, where they originally grew wild. Thus far American wild plants have not contributed their due share to the food of the world.

We therefore welcome the suggestion that we have heard that our native ground plum (*Astragalus caryocarpus*) might quite profitably be added to our list of garden vegetables. Most residents of Iowa know this plant, and no doubt some who read this have proved its value as a table vegetable. It is a low perennial, of a bean or pea-like look; it bears clusters of purplish flowers very early in the season, and these develop pods of about the size of a plum, whence the name, ground plum. These pods are full grown in May, and when cooked, are, even in their wild state, quite palatable. In order to test their merits on the table, the writer caused some to be cooked, and prepared after the manner of string beans. The result was decidedly in favor of the introduction of the ground plum. There can be no doubt that in this wild plant we have what might be made one of our best early vegetables. Its extreme earliness, and its perennial habit are what especially commend it. Just think of a perennial bean patch! — [Progressive Farmer.]

Editorial Correspondence.

Centennial Grounds.

PHILADELPHIA, July 27th, 1876.

EDITOR INDUSTRIALIST: — Thinking you might be pleased to hear from me, I will drop you a line to-night. The weather which was so very warm before I reached here, is now cool and delightful, and there is a much larger attendance than there was a week ago; probably forty or fifty thousand in attendance to-day. The exhibition is huge, grand, beautiful; too much cannot be said in praise of it. It is difficult to imagine a building covering twenty-one acres of ground, literally packed with specimens of every kind of handiwork which is produced by the ingenuity of man in all parts of the world, and that of the richest possible. Think of a reed organ worth fifteen thousand dollars, a set of bed-room furniture worth six thousand, a piano worth four and one-half thousand, a pen-holder containing a little watch worth eight hun-

dred dollars, a dress worth twelve hundred and every thing else on that scale, and you get a faint idea of the glitter and dazzle of the main exhibition building.

I visited, to-day, the divisions of Germany, Austria, Russia, Spain, Turkey, Portugal, Egypt, Denmark, Japan and China, and could not begin to enumerate the different things I saw. Some of them were ships, clocks, watches, pianos and all kinds of musical instruments, broadcloths, velvets, cutlery, stationery, jewelery, lace, dresses, silks, pipes, bronze ware, toys, furniture, carpets, rubber articles, sponges, old relics, saddles, furs, &c. I have not yet really begun on the Art Gallery, which is beyond expression in grandeur and beauty, nor on Machinery Hall, nor on the Agricultural Hall. They are all perfectly magnificent.

Kansas has made a very fine show in her own building, something that we are not at all ashamed of. Colorado has a beautiful exhibit of animals and cereals. I spent one-half day in the educational department. Drawing takes the foreground in the exhibit. The specimens are fine. There are files and files of bound books of examination papers, which it would take a person years to even glance through. Cincinnati stands pre-eminent for penmanship and neatness of forms. But I must stop. Good board in private families can be secured at from one to two dollars a day. Very respectable accommodations at one dollar, and plenty of hotels at from two to four dollars a day. This is certainly a rare opportunity to see a world's exhibit, and it costs much less here than I supposed.—[Prof. J. E. Platt.]

Raising Hogs.

In this great corn growing country raising hogs is the most universal and one of most profitable features of Western farming. We must market our corn through stock, in preference to selling it in bulk. One of our readers in this county says he estimates that his corn which he fed to hogs, brought him one dollar per bushel this winter, and that the marketing is easily done as he drove his hogs to town in one day, for which he received \$900, and to haul off his crop of corn would take weeks, and not half so much money would be realized.

It pays every farmer to have a good supply of hogs, for our hogs are almost universally well-bred high grades or full-bloods of some of the popular breeds, and the nearer full-bloods they are, the better they pay for fattening, as well as for breeding. In fact, none but thoroughbred boars should be used under any consideration, and constant renewals of fresh blood should be kept up to keep the farm hogs improving, else they will soon run down.

The demand for hog meat is greater than even our great resources of supply, and more attention should at once be given to increasing the number of hogs, and thus improve the market for our great staple, corn.—[Western Agriculturist.]

Improved Stock.

The advantages of improved stock are now being pretty generally conceded by our Western farmers. The old prejudices against fine stock are abandoned, and well they may be, for it ill becomes an intelligent farmer to thus oppose his own real interests in this day and age of improvements, for the world moves and we must keep pace with it. The improvement of stock has been constant, gaining year by year, until almost every farmer has some kind of improved stock around him, and the cause of this universal adoption of the improved breeds is because it pays better. Stock on our Western farms is the best market for our farm crops, and the improved breeds and their grades pay better than the native scrub stock. Our small Western horses, which are about the most unprofitable stock that can be raised, we are glad to see, are being superseded by the Normans and Clydesdales, their half-bloods more than doubling the value.

The Shorthorns have taken the lead in improved cattle for beef, and the benefits of these grades in our markets are being conceded by all and shared by many. The Herefords, too, are growing in popularity as beef cattle, while the Holsteins, Jerseys and Ayrshires are the popular dairy breeds. The hogs have shared the most universal improvement. The Poland China, Suffolks, Berkshires, Essexes and Chester Whites all have their admirers. The sheep, too, share the improvement, and the Cotswolds, Southdowns and Merinoes are largely taking the place of the native scrubs. There is, too, and an endless variety of improved poultry, with the most enthusiastic admirers of the several breeds. Now, since it is a settled fact that the improved stock pays best, every farmer should begin to supply himself with the improved breeds, if he has not already done so. Thoroughbred males only should be used in breeding all class of our farm stock, and this motto should be adopted by every Western farmer.—[Western Agriculturist.]

GRANGERS ask for equal rights and exact justice — nothing more, and they will take nothing less. They concede as much to all others. They wage no war upon legitimate enterprises. They look upon the merchant as a link in the chain which has grown unnecessarily long. Certainly they have no personal feelings in the matter, but they think they can improve upon the old system by shortening this chain. Farmer's pockets are empty, not from want of economy, not because they do not labor from sunrise to sunset, not for want of resources, but because equal rights have been denied. They desire to enjoy more of the wealth they create. They seek to free themselves from debt and heavy mortgages, and are struggling to do so by the only means which appear available for them.—[Ex.]

THE INDUSTRIALIST.

SATURDAY, AUGUST 19, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Stewart expects to be here the fore part of next week. Hallelujah! Amen!!

The next term of the Agricultural College begins Thursday, August 24th, 1876.

Capt. Todd brought us in some very fine grapes yesterday morning, for which he will please accept our thanks.

The walls of the horticultural building are three or four feet above the basement and are being pushed forward rapidly.

We had a letter from J. F. Arnold, and he says he would not be without the INDUSTRIALIST if it should cost only half the money. Sensible young man.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

The hot sun and the moisture together have rendered the atmosphere a perfect vapor bath. As a consequence our gas does not pan out this week as well as usual.

The funeral services of Mr. G. B. Whiting were held last Sunday afternoon at the Episcopal Church. The services were under the direction of the Masons, Chaplain Reynolds of Fort Riley officiating.

Prof. Platt forwarded a communication to us immediately after getting to the Centennial, but it has just arrived. Age, however has had but little effect upon it and it will be read with interest.

Prof. Shelton and family returned last Saturday. Prof. Gale arrived on Tuesday and Prof. Platt on Wednesday. Thus the allied powers are concentrating for another campaign against the Napoleon of ignorance.

We noticed in coming from the city this morning, that the new sidewalk leading to the College, has been injured considerably by the high water. The grade has been washed out badly and the stone work has settled in many places.

On account of the rain the progress made on the new buildings has been very slow the past week. The plasterers at work in the chemical building have concluded their labors in the lecture room and the laboratory proper, at least for the present.

The telegraph room is assuming a very attractive appearance. The cases and stands are glittering with varnish, the walls are adorned with handsome pictures; and W. C. is determined that his department will not be behind the best of them.

The recitation rooms in the College are being improved by the addition of new blackboards. We notice, too, that the mop and brush are busy at work. Sidewalks run to both entrances and hereafter the mud must be content to stay outdoors.

We understand that the young man who was in charge of the Stock Department on the College farm, has lately resigned his position. We exceedingly regret to lose the services of this gentleman, as the faithful manner in which he performed his duties was not only an honor to himself but a credit to the Institution.

Yesterday morning we received a call from Major Adams, accompanied by several gentlemen who have been delayed here by the detention of the trains. Among them were some of the delegates from the late convention at Topeka. Call again, gentlemen. Never mind the "fighting editor," he's quite tame and gentle.

Two forges have been put up in the blacksmith shop. Capt. Todd informs us that one of them will probably be ready for work when school begins. The carpenter shop will hardly be ready for the boys at the beginning of the term, and they will have a good chance to contribute their share towards setting things to rights.

We received a very welcome visit yesterday from Rev. Mr. Campbell, accompanied by an old friend of ours, Mr. Davis, of Onarga, Ill. Mr. Davis was very favorably impressed by our Institution and is thinking some of settling in Manhattan. If such be his conclusion, the town will secure a good and useful citizen.

It commenced raining about six o'clock Wednesday morning, and for three hours the deluge descended. The streets, to a great extent, became rivers, and the city authorities were at once compelled to begin repairing the damage caused by the serious wash-outs which occurred. It continued to rain more or less all the forenoon, and Prof. Gale informs us that fully five inches of water fell. Several portions of the town were inundated, and several trains were detained by the number of bridges washed away.

He was a masculine of the bovine genus and, his ancestors formerly hailed from Jersey. He did not care to have any hemp put around his horns, and he quietly lifted the would be applier of hemp from the ground. A roar of kindled rage broke from his majestic bullship and snuffing the air of freedom he bounded into the sunshine. But two bipeds of the genus homo sprang forward to the chase. For lances, they snatched up a couple of pitchforks, and the circus at once commenced. He flung the dirt into the air and the ground shook beneath his lordly tread. But homines conquered bovine, and he of the Jersey name was bound.

Dr. Patee.

20-tf

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For further information, apply to
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THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, AUGUST 26, 1876.

No. 19.

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Education for the Farm.

BY J. A. ANDERSON.

What knowledge will be most serviceable to the agriculturist? He cannot, in a life time, much less in the few years spent at college, acquire all knowledge, or learn a tittle of all that is interesting, curious, or even distantly related to agriculture. He is limited by want of time, and often by lack of money, so that he must select from among the things known those which will give him the best success as a farmer. He needs a practical knowledge of his own language, that he may fully understand the ideas of others, and sufficient skill in the use of that language to express his own ideas clearly and vigorously; but does he need the same familiarity with Latin, Greek and Hebrew that is essential to the best success of a professor of philology in a European university? or does he need the same skill in rounding sentences and selecting rhymes that is prized by the poet?

He needs a knowledge of mathematics as used in business life, and such skill as will enable him readily and accurately to make all the computations and keep all the accounts incident to his occupation; but are conic sections and the calculus as serviceable to him as to the astronomer? Up to a certain point, English and mathematics, if practically taught, are of great value to every man, no matter what his vocation; but neither is in itself an end. Each is only an instrument to be used in gaining an end; and the first object of the student should be the acquisition of a ready skill in the use of the instrument. If, after so doing, he is able to study the curiosities of literature, as an expert, so much the better; but ability to write legibly, to spell correctly, to speak grammatically, and to use the word which exactly expresses his meaning, is of far greater moment. And it is a fact that oftentimes practical English and practical mathematics are sacrificed in the effort to rush the student through the "higher," and, so far as he is concerned, the "fancy" branches of each. The principle of selection thus indicated is applicable to a score of other sciences; all of which are interesting to the scholar of elegant leisure; each of which is of great value to one specialist, but of no value whatever to another specialist, and many of which are practically valueless to the farmer. But now there are some kinds of knowledge which are of especial service to him, and which are not equally so to the physician, jurist or mechanic. His daily work is with plants; and plants are but so many curiously wrought machines. These have different parts, which perform different services, and which depend upon dis-

similar conditions. For exactly the reason that a practical knowledge of anatomy is useful to the surgeon, is a practical acquaintance with botany useful to the farmer.

But plant machinery does not impel itself; it is driven by forces chained in the earth and air, as the engine is driven by steam. He needs to know both the mechanical and chemical action upon plant growth of light, heat, water and soils; and how to increase or decrease this action, as interests may require. Hence, a practical knowledge of physics and chemistry is valuable to him. Plants are subject to the depredations of insects and birds. These, in turn, are devoured by others. He should know and cherish his zoological friends, and use their instincts in the destruction of his foes. Two reasons make a knowledge of the habits and value of domestic animals indispensable. First, because they furnish his motive power for the plow; and second, because many of his crops can be profitably sold only after their conversion into flesh and milk. The knowledge of these, as of other sciences, should be imparted and acquired with reference to the use which he is to make of it, viz: as enabling him to correctly answer the question that is always uppermost in the true farmer's mind—"Will a given thing pay?" Real farmers do not plow from dawn to dark, swelter in the harvest field, or shiver in the corral just for the fun of the thing. They farm for profit. They do not toil in order that the sweat may trickle to the earth, but in order that they and theirs may eat the bread which can only be earned by the hard labor which brings sweat. Neither working nor sweating is the chief end of farming; profit is. And if the farmer can gain the end by substituting machinery for his own muscles, he will.

Nor is a knowledge of the sciences which relate to agriculture the chief end of farming; it, like work and wagons, is only a necessary means to be used in gaining the real end. As in the case of English and mathematics, so botany, physics, chemistry and zoology may be taught in either of two ways:—First, as pure sciences; second, as practically useful to the farmer. In the former case, the student will become a scientist; in the latter, a capable farmer. And often there is as much difference between the two men as there is between a law library and a successful lawyer. Here, even those sciences which relate most directly to agriculture must be re-arranged and presented to the student with controlling reference to the use he will make of them.

But when all the sciences useful to the farmer have been taught as indicated, and with the best results, the student has still an essential part of his education to gain, namely, such skill—both mental and manual—in applying knowledge to farm work as will ensure him the largest income with the least outlay of money, labor and time. Notwithstanding a common opinion to the contrary, there is evidently a necessity for

professional teachers of Practical Agriculture and Practical Horticulture. If agriculture be regarded as the aggregate of several recognized sciences, and, therefore, as itself a science, it deserves the same carefulness in teaching accorded to the sciences of which it is composed. Or, if regarded as only an art, so completely does it depend upon these sciences, so complicated are its applications of their interwoven truths, and so important are the consequences of a skillful or bungling exercise of the art that no pure science presents a stronger claim for capable masters and thorough drill.

The teacher of an established science necessarily views it from the standpoint of investigation or inductive discovery, and so presents its facts and theories, directing them to the wants of the farmer as best he may. The teacher of Practical Agriculture must view the same science from the wholly different standpoint of "Will it pay the farmer?" The conclusions reached by the two men will sometimes clash, for trial frequently shows that a proven fact in one science is so modified by an equally proven fact in another science as to be relatively valueless in combination. This experience is not confined to agriculture. The keenest experts of the Patent Office, after close study of a working model, and upon seemingly the best scientific grounds, frequently decide the proposed application of a given principle to be correct and valuable; whereas, the construction of the machine shows that it either won't work at all, or won't work profitably. And if such be the fact in the science of mechanics, the principles of which are mathematically demonstrable and easily traced in combination, much more is it apt to be the fact when we attempt to deal with the subtle forces of light, heat and moisture, hidden in mysterious combinations and producing fantastic results. No science used by man more imperatively demands the constant test of actual experience. The iron used by the blacksmith in every State is practically the same, but the soil which the farmer in Kansas works is not practically the same as that of Ohio or Maine, and sometimes the same farm has as many different soils as acres. The flame and tools of the smith are the same everywhere, but how great are the diversities of the warmth and rains which build plants and furnish fruits!

Grasshoppers in Colorado.

The grasshopper army of 1876 reached us Saturday last, and, so far as we have heard, destroyed the gardens and corn crops of the county. The crop prospects in the valley were excellent, notwithstanding the unfavorable season. This third annual disaster to the faithful few who have undertaken farming, seems enough to drive them from the business. The tide must turn some day, however. We suppose when our cup of misery is full, whether soon or late, the stream of wrath will be stayed. The 'hoppers appeared to come in here from a northeasterly direction and to depart in a southwesterly, as before.—[Ex.

THE INDUSTRIALIST.

SATURDAY, AUGUST 26, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Indian Culture.

The education of a people must be the work of years. So changes or reforms in an educational system cannot be effected at once. This fact has been pressed upon us constantly in a short trip to the Indian Territory. This statement applies not only to Indians, but to the whites also. Any proposed reforms in education have always been met by stolid ignorance on one side, and on the other by an interested conservatism. The ruts which ignorance and interest make are deep, and it is often hard to get out of them. We find ourselves inclined to distrust the possibilities of culture, because a people are unable to leap at once from the condition of barbarism to that of the highest refinement. We may thus do great injustice.

While the news columns of our dailies are filled with reports from the Black Hills, and the probabilities of a long and bloody war with the Sioux, it may be proper to recur to the possibilities of Indian culture as exhibited among the five consolidated tribes: the Cherokees, Choctaws, Chickasaws, Creeks and Seminoles. It is, perhaps, useless to speculate upon the future of these people, but certainly interesting to see what they have accomplished under disadvantages sufficient to have crushed almost any race. As illustrating their progress, take first the Choctaw. As early as the year 1826 these people were struggling for the advantages of civilization. They had felt at that early period the destroying influence of intemperance; and, while the great mass of even Christian whites were indifferent to the use of intoxicating drinks, the Choctaws passed in 1826 an anti-liquor law. In that year they had their first written laws, and the anti-liquor law was the first one published.

While they were just taking their first steps towards civilization, they were compelled to break away from the homes already dear to them, and, at a great sacrifice, move in the year 1832 into the wilderness. Notwithstanding this removal, this people have among them fifty-two schools, and they are expending this year for educational purposes \$27,534.95. It is only just to say that their progress in other respects has kept pace with their educational advantages.

The same progress has characterized the Cherokee nation. Their school system is more extended, and perhaps more fully developed. They have seventy common schools and three schools of a higher grade, and an annual income, as by this year's

report, for school purposes of \$72,000. The following facts will speak for themselves, copied from the report of the Grand Council, at Okmulgee, held in 1875. "The population of the Cherokees is about 17,000. Their annual school fund is \$70,000. They have sixty-two schools, an orphan asylum and female seminary, supported from the public fund. An asylum for the deaf and dumb and otherwise unfortunate has been built at an expense of \$25,000, and an educational institution for the males built at a cost of \$75,000. They have about 75,000 acres of land under cultivation."

While some may be inclined to accept the popular cry against Indian civilization, it will be well in these times to remember what these people have done in fifty years. The boy of fifty years ago was trained for the war-path. In place of this we find now the school-house, the seminary, the church, the newspaper, and other evidences of a higher civilization. While there remains much to be done in the way of education, no one who has the interests of the race at heart can look over the evidences of past progress without emotions of grateful pleasure. This progress gives us faith in the possibilities of the future.—[Prof. Gale.]

Osage Orange Again.

Prof. Gale, of the State Agricultural College, in speaking of trees for timber culture, says that "for timber claims there is probably no tree which will bring larger or sooner returns than the osage orange for the outlay made." The Professor should have added, however, that the osage orange is not a tree that comes within the requirements of the timber culture act. So that, however profitable its cultivation may be, it is in fact of no use on a timber claim.—[Peabody Gazette.]

We find the above reference to a late editorial. We are not inclined to believe the above statement correct; or if there has been any ruling of the land office that excludes the osage orange from the list of timber trees, it certainly should be revoked. The osage orange is not a fruit tree and is not a shrub, and hence should come within the requirements of the law as laid down in the report of the Commissioner of the General Land Office for 1875, page 56. A recent visit to the region where the osage orange is a timber tree in its native forests, has served to confirm what we wrote some weeks ago.

As an ornamental tree it has few superiors; and what is especially in its favor, the beauty of the tree increases with its age. There are some very fine specimens growing on the grounds of Judge B. L. Kingsbury, Burlington, Kansas. Farther south we find much larger and older ones. The tree is perfectly hardy. Though it may not attain the height of sixty feet here as it does at the South, it will grow large enough to be of great value. We have been assured by intelligent persons in the

South that this tree is exceedingly valuable for the construction of carriage wheels, fence posts, or any work requiring hard timber and which must be exposed to the weather. This tree should be grown thickly, that is in rows four feet apart and not to exceed two feet in the rows.—[Prof. E. Gale.]

Progress of Industrial Education.

In thirty-six States there are now thirty-nine different industrial colleges which have received the national endowment granted by Congress under the act of July 2, 1852. Louisiana has established one during the present year, and it is already in successful operation. Every State, except Nevada, has established one or more. Georgia and Missouri have each two, located in different parts of the State, but belonging to one university. If we count two additional colleges for these States, the number will be forty-nine. All are in operation, except those of Florida, North Carolina and Texas. Those of Indiana and Louisiana have been opened during the present year. The number of professors and assistants employed in them is 435; and the number of students in attendance is 3,669. Of the land granted by Congress under the preceding act, 12,577 acres have been sold during the year by five States—Iowa, Kansas, Michigan, Minnesota and Wisconsin—at an average price of \$4.36 per acre, amounting to \$54,835. The number of acres remaining unsold is 1,049,734. There are only ten States which have not sold all their land. They are Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Nevada, New York and Oregon. Nebraska, Nevada and Oregon have not sold any of theirs. The disposition of the curators of these colleges during the year appears to have been to make them more industrial and less literary in their character, and to make labor compulsory and unremunerative, so far as it is educational or designed to illustrate the branches taught; but beyond this to leave it voluntary, and to pay for it according to the amount performed and the skill with which it is executed.—[Report of U. S. Commissioner of Agriculture for 1874.]

KANSAS will have this year, the largest corn crop in her history. Last year it was over eighty millions of bushels. This year it will be over a hundred millions. This, at thirty cents a bushel—and our farmers are now getting more than that—is worth thirty millions of dollars.

THE maple worms are now thickly packed on the lower sides of the lowest leaves of the trees which they have attacked. Thousands upon thousands may easily be killed by cutting off the lower leaves and either stepping on them or throwing them into the sunlight. No efforts should be neglected for the destruction of all such pests.

MR. JOHN WEED commenced in Kansas in 1860 with five dollars. He now has three hundred sheep, four hundred acres of deeded land, one-half under cultivation, twenty horses, hay, poultry, farming implements, and all the conveniences of a first-class farmer. His post-office is Oak Hill, Kansas.

THE INDUSTRIALIST.

SATURDAY, AUGUST 26, 1876.

TIME-TABLE OF THE K. P. RAILWAY. PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M., and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Ice cold soda at Briggs'. 19-2

Melons on ice at Briggs'. 19-2

Ice cream daily at Briggs' at four P. M. 19-2

Grapes! Grapes!! Grapes!!! At Briggs'. 19-2

The Board of Regents will meet Friday, Sept. 1st, at 11 A. M.

Briggs' is the only place in town where you can get a good cold soda or lemonade. 19-2

The farmers in this section are busy putting in fall grain. An immense acreage is being sown.

President Anderson and family, Prof. and Mrs. Kedzie, Mrs. Werden and Mrs. Cripps have returned since our last issue.

Delightful weather the past few days. Cool, refreshing and invigorating. A pleasant change from the experience of the previous week.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

Four gentlemen students can obtain board at Mrs. Pound's on College Hill, near the old College building, at \$3.50 per week. Other questions answered upon application.

There is quite a demand in this vicinity for house-maids. Good girls desiring work will readily find situations in first-class families residing on the Hill. Apply immediately.

Dr. Perry, residing in the northeast part of Manhattan, desires some boarders. Students wishing to reside in the city will find this a convenient location. Rates made known on application.

The Farm Department reports this week another litter of pigs, Berkshire this time. These pigs which are of a very superior quality will be offered for sale soon, and parties desiring to make purchases would do well to correspond immediately with Prof. Shelton upon the subject.

We acknowledge the receipt of a complimentary ticket to the Shawnee County Agricultural Society's Seventh Annual Fair, to be held at Topeka, on the 26th, 27th, 28th and 29th days of September, 1876. The managers are endeavoring to make this a first-class Fair in every respect, and doubtless their efforts will prove successful.

The Fall Term of the Agricultural College opened Thursday, Aug. 24th, at nine A. M., and as we go to press everybody is busy over enrollments, examinations, classifications, time-tables, and the work incident to the first days of a new term. An unusually large number of new students appeared on Thursday, and every train brings new and old. The prospects are very flattering, and by next week we will be able to get the lists. In the present rush even an INDUSTRIALIST reporter stands a better chance for snubbing than news.

Irving Todd and Miles Ellsworth, two of the students in the Printing Department, had entire charge of the mechanical work on the INDUSTRIALIST during the three weeks that Superintendent Stewart was absent, and the paper, as it appeared during that time, is sufficient evidence of the creditable manner in which they performed their labors. Mr. J. F. Berri kindly acted as local editor, and did his work satisfactorily. Mr. Stewart returns thanks to the above-named gen-

tlemen for thus enabling him to make a very pleasant and profitable trip. May their shadows never grow less.

The Alpha Beta Society met in Prof. Ward's room yesterday afternoon. A goodly number of members and visitors were present considering the fact that it was the first meeting of the term and only a few of the old students have yet returned. The election of officers was postponed one week in order that more of the old members might have a voice in choosing the officers.

Miss Lucy Knipe was recommended for admittance into the Society. During extemporeous speaking several of the members took occasion to declare their allegiance to the Society and their determination to work for its best interests the coming year.

The Society will hereafter meet in the telegraph hall which has been nicely fitted up, and is now one of the pleasantest rooms in any of the buildings.

The following is the question for discussion at the next session: "Resolved, That we should have a herd law in Riley county." Affirmative—G. H. Failor, W. C. Howard, Miss Ella Child. Negative—L. E. Humphrey, J. S. Griffing, A. A. Stewart.

After appointment of literary duties and regular closing exercises the society adjourned.

The Annals of Kansas., by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

Township Books, Poor Records, Estray Records, Poll Books, Official Records, furnished by the Kansas Publishing House, Topeka.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets.

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan. 37-3m

Clother.—Wm. Knostman, dealer in Ready-Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as anywhere in America, at the Kansas Publishing House, Topeka.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

A Thorough and Direct Education.—At the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition—Absolutely Free! The Fall Term began Thursday, August 24th, 1876.

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill, by an experienced operator, in sending, receiving, office accounts, reports, and telegraphic book-keeping. No charge, except for blanks; say \$3 per Term. Special course of lectures by Prof. Kedzie on electricity, battery, etc.

Gardening for Profit!—Instruction and Drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening. Kansas Forest Culture a specialty. Seventy acres devoted to experimental apple, pear and peach Orchards, Vineyards, Nursery, and Gardens.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects injurious to the Kansas Farmer.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books.—by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-1f GEO. W. MARTIN Publisher.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which 95 cents will be paid, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan.

Farming for Profit!—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings, Apparatus illustrating the course in Practical Agriculture consists of a farm of one hundred and eighty-five acres, well provided with the modern improvements in implements and machinery. A fine herd of Shorthorn, Devon, Jersey and Galloway cattle; and Berkshire and Essex pigs.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography, Household Chemistry. Special course in Chemistry for Post-Graduates. The Laboratories are fully furnished with the best philosophical apparatus and the largest assortment of chemical apparatus and reagents west of the Alleghanies, all of which is for the use of the students.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms are being fitted up in a comfortable and attractive style.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegaph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

Eagle, Wichita City. Weekly; terms, \$2 per year. M. M. Murdock & Bro., Publishers.

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

Chronicle, Lyndon. Official county paper, Republican; \$2 a year. W. T. Chalfant, Editor and Proprietor. 11-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibberts & Co. 16-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

Courier, Columbus. Leading paper in Cherokee county. Politically, Republican. S. O. McDowell, Editor and Proprietor. 14-1m

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Leader, Cottonwood Falls. Official paper of city and county. The Leader is not a real estate paper. \$1.50 per year. W. A. Morgan, Editor and Proprietor. 8-1m

Tribune, Lawrence. Daily, \$8; weekly, \$1.50 per annum. Independent Republican. Established Oct. 15th, 1854. John Speer, Editor. Speer & Covel, Publishers. 11-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. A. G. McBride, Editor. 10-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkinson, Editor and Proprietor. 9-1m

Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$5; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Blade, Wamego. Don't read this until you send for a sample copy of the Blade, the leading local paper of Pottawatomie county. R. Cunningham & Co., Publishers. 6-1m

Independent, Oskaloosa. Established in 1860. Is in a flourishing condition, with a steadily increasing circulation. Edited and published by J. W. and F. H. Roberts. 6-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Giford & Winter. 6-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. J. M. Cavaness, Editor. 6-1m

Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis." \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor.

Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will. D. Jenkins, Editor and Proprietor. 8-1m

Monitor, Jewell Centre, \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

Dispatch, Hiawatha. In its seventh year. Official paper; organ of the staunch old Republican party. Thoroughly established; home print. \$2 a year. A. N. Ruley, Publisher and Proprietor. 8-1m

Gazette, Enterprise. A 40-column quarto. Independent Republican. Devoted to the financial interests of the publisher and the general good of the people. V. P. Wilson, Editor and Proprietor. 10-1m

Citizen, Fredonia. Established 1870. Circulation 828 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Journal, La Cygne. Saturdays. Republican 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Printing I—Daily instruction and drill in the work of a First-Class Printer. The Literary Departments offer a thorough education in the construction and use of the English Language, as employed by the Proof-Reader; in Book-Keeping; and in Industrial Drawing, as the best developer of that taste necessarily exercised by every good Job Printer. The Printing Department is well furnished with all the facilities for a speedy mastery of the art of Printing, and is in charge of a practical printer. Besides regular class instruction in printing, the weekly publication of the INDUSTRIALIST by the Department furnishes advanced students the requisite drill in newspaper work.

KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

MECHANIC'S.

To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

WOMAN'S.

The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR.—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, SEPTEMBER 2, 1876.

No. 20.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.
Address A. A. STEWART, Manhattan, Kas.

Sketches of Kansas Agriculture.

To those who are so unfortunate as to reside in other States, Kansas is an agricultural puzzle. It entered the Union in 1861, not only with the title of "bleeding," but also that of "starving" Kansas; and on more than one occasion since, it has been blazoned over the Continent as powdered by drouth, or eaten down to the very limestone by grasshoppers. Yet, before the nation had time to settle comfortably to the belief thus created, it has been rudely jostled by the same Kansas exultingly marching away with the first national prizes for the best display of fruit, won at Richmond, Philadelphia, Newark and New York, against the competing States of the Union; or by the official award, so frequently made in governmental reports, "Kansas again leads in the average yield per acre;" or by the vast army of clear-headed immigrants annually settling in its broad valleys. Among the multitudes assembled at Philadelphia in 1876, there will be thousands of sturdy men and great-souled women who, with minds still quickened by the agonizing recitals of self-constituted "agents" from the grasshoppered Kansas of 1874, will be more than startled by the actual products of Kansas in 1875. In fact, the Centennial display will be a queer commentary upon the "relief" wail; and, should it do nothing more, will at least give good ground for the assertion, that a State, which not only can afford a year's princely entertainment to myriads of famished locusts, but also can take a front seat in the National synagogue, must have rich lands as well as energetic citizens.

The principal trouble in this agricultural puzzle, is the fact that, as in all new States, the misfortunes of Kansas have been greatly exaggerated. The causes of this exaggeration are easily found. A drouth in Ohio or New York occasions no apprehension that those States are unsuited to successful farming; because the experience of generations has shown that dry seasons are the exception, and, in spite of them, no business has there paid so well as that of the farmer. But the same drouth occurring in Kansas startles the new-comer by the fear that rain may here be the exception and dry seasons the rule. From the nature of the case he cannot turn to a long record of ancestral experience; there is none. And that convenient gentleman in such emergencies, "the oldest inhabitant," is apt in a State fourteen years of age to be an Indian; and, without questioning the moral character of this estimable personage, Mr. Lo's opinion on agricultural topics is not usually accepted as satisfactory authority.

Again, in the Eastern States, a man with-

out provision for at least twelve months, without land, horses or plows, would not attempt to settle on a piece of wild soil, with the expectation of winning from it a support in the first, or even in the second year. Both he and his neighbors would realize that his capital could not, in the nature of things, yield so great an interest; yet it is by no means rare for hundreds of toiling men, with just enough to break a few acres, in Kansas, to expect that the "sod crop" therefrom will not only furnish a year's provisions, but also build houses and buy cattle. When this crop fails, as it sometimes does, these men must suffer; and they are prone to hold Kansas responsible for consequences which evidently were the logical results of their lack of sufficient capital.

Furthermore, in every new country will be found a sprinkling of loud-mouthed individuals who never succeed anywhere, or at anything, and who, through ignorance of practical farming, or organic weariness, would inevitably starve on the best farm in America. To this class, seeking a pretext for returning to their wife's relations, a partial drouth is a boon, and grasshoppers a munificent god-send. They start, and "back home" is speedily supplied with yarns thick as hawsers about "the State what won't grow nuthin'."

Every State has its agricultural drawbacks, every business its peculiar risks, and even petit juries are uncertain. There is no dead-head train, in any vocation, which of itself carries the snoozing passenger to prosperity. Kansas, at least, is not a balmy paradise for dreamy loafers. The soil won't "break" itself, though it will break the farmer who doesn't work it. Corn won't grow where it was not planted, in paying quantities. The cottonwood does not usually bear a large crop of apples. It is the exception when valuable herds of shorthorns accidentally wander into Kansas corrals, to suddenly enrich the proprietors with \$40,000 cows. Even Berkshires do not multitudinously swim the Missouri, just to furnish the new settler with winter's meat. These confessions are sad, but true!

Railroads are in the habit of charging for transportation in Kansas. Merchants in Kansas rarely "give away" goods, outside of advertising columns; and, as a general rule, never sell anything that anybody wants more than ten feet "below cost." Mechanics demand and receive good wages for their work in Kansas. If they know themselves intimately, Kansas farmers require the highest market price for their crops. And even editors enforce the cruel rule that subscribers must pay at least two dollars a year for a paper worth five. Twenty dollar gold pieces are less numerous in Kansas than flies; and it is easier to get a hat full of "promissory notes," artistically executed by a highly assorted lot of individuals, than even a fob full of greenbacks. Those gentlemen who, unconsciously, and yet really, expect to farm without labor; to raise herds without vigilant care; to pluck peaches from wild plum

trees; to live luxuriously on the interest of what they owe; and to be elected to the United States Senate because of the universal scarcity of brains in Kansas, previous to their advent, will learn something greatly to their advantage by going several millions of miles in any other direction. This State won't suit them. But to those who realize that skill, labor and capital are essential to success in farming, as in every other business, the agricultural statistics may be worth examining.

Whatever may be alleged respecting the fertility or poverty of Kansas soil, the abundance or lack of seasonable rains, the heat or cold of the climate, the gentleness or fierceness of the winds, it is certain that the best evidence on these and all other points of practical interest to the farmer, is that furnished by the crops actually raised or failed to be raised. Corn requires a strong soil, moisture and heat; if either of these essentials be lacking the crop will show it. When a man harvests twenty bushels of wheat to the acre, that fact is quite as satisfactory to him as any analysis of the soil or any record of the rain gauge. And if, through a period of years, this fact repeats itself as often as in those States where an experience of generations has demonstrated their adaptation to wheat raising, he would disbelieve any assertions not in unison with the fact. On the one hand, he would be slow to believe that his field could average seventy bushels to the acre; on the other hand, he would laugh at the statement that the soil was too poor or the supply of rain was too small for profitable wheat growing. However valuable the theories and facts of the general science may be, and many of them are valuable, still the best of all possible evidences to any practical man is that of bins and ledger.—[J. A. Anderson, in Report of State Board of Agriculture for 1875.]

Good sense can be exercised in caring for wife and children, no less than in caring for stock.

Taking the year as a whole and the average income of farmers is better, and the average labor lighter, than the income and labor of any other class of men.

Many a farmer's boy goes into some city, and struggles along until middle life, with nothing to show for his labor, except that he has thoroughly learned that a half-starved lawyer is less to be envied than a well-fed farmer.

No young man has talents, abilities or education beyond what may be used on a model farm. To the educated young farmer is open an honorable career, and a promise of wealth more bright and more sure than any other calling offers.

Every farmer should set apart some space for a flower garden. Flowers teach the heart. The farm house where hearts are cultivated will be a happy home, and children brought up there will make good men and women in the world.

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 2, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Fall Planting of Strawberries.

We have been asked within a day or two, "Is it best to plant strawberries in the fall?" The answer to this question must depend very much upon circumstances; for under certain conditions it is best, under others not. If we have plenty of rain in August and September and can obtain good plants from our own grounds, or near by, so that they will not suffer from being too long out of the ground in warm weather, and have time and disposition to give our plantation a little extra care, then plant in the fall. If, on the other hand, you cannot plant in the early fall for want of time; or if the season is dry, as it frequently is; or if you have to send long distances for plants; or if you have no extra time to devote to your plants, then let strawberry planting alone in the fall. A few persons only in Kansas make fall planting a success, probably in the eastern part of the State more frequently than with us.

Mr. C. G. Wickersham, of Hillsdale fruit farm, Parsons, Kansas, plants with marked success in the fall. We must regard the careful manner in which Mr. Wickersham handles his plants as one of the great elements of his success. His motto is "to do everything well," whether it be the setting of a strawberry plant or the packing of a car-load of fruit. Mr. W. prefers fall planting, say in August or September, immediately after a soaking rain. He prefers to raise the plants on his own ground, so that a few can be taken up at a time and put out immediately. This he regards as essential in hot, dry weather. He selects for his own planting medium sized plants. He takes up a few plants at a time with a trowel or knife, then shortens in the roots half an inch so as to encourage, as he believes, the sending out of fresh rootlets. It is probable that this slight shortening in may have a good effect in removing the bruised and torn portions of the rootlets, thus leaving them in a better condition to withstand the effects of removal.

He removes all the leaves but one or two, and then plants one very carefully, spreading the roots well in the soil. He would in field culture plant in rows five feet apart and fifteen inches in the row. The plants should be kept clean of weeds at all seasons; and no runners are allowed to grow on plants designed to produce the best results. Most planters here are inclined to permit the runners to remain, but Mr. W. thinks it far better to keep them off, for several reasons: First, convenience in protecting the plants through the winter;

second, convenience in gathering the fruit; third, on account of the quantity of the fruit; fourth, and more important than all else where there must always be sharp competition, the quality of the fruit. After many years' experience, notwithstanding the extra work and care, he is convinced that this course pays.—[Prof. E. Gale.]

Kansas was the first State to send an invoice of apples to the Centennial.

The Eureka Herald says the corn crop in Greenwood county will be immense.

Silk will be an important production in Kansas this season, and it is expected \$20,000 worth will be shipped.

A bunch of lowland grass was brought into Lawrence the other day, which measured twelve and one-half feet.

A farmer in Pottawatomie county raised this season nine hundred and six bushels of barley of a fine quality on twenty-three acres of land.

The Salina Herald says that many pieces of corn in Lincoln county will yield ninety bushels per acre, and the general average will be about fifty.

Students Enrolled Since Aug. 24, 1876.

NAME.	COUNTY.
Adams, Emma L.	Riley.
Bailey, Willie S.	Osage.
Boley, Mary B.	Riley.
Bayles, John	Riley.
Benjamin, Daniel A.	Atchison.
Benjamin, Emery W.	Atchison.
Bissell, Edgar	Phillips.
Blain, Arthur T.	Riley.
Blanc, Jno. H.	Coffey.
Briggs, Harry	Riley.
Brous, Frank D.	Riley.
Brown, Ada E.	Riley.
Brown, Cortez	Washington.
Brown, Mark L.	Riley.
Browning, Emma E.	Riley.
Buell, C. Stewart	Riley.
Burnham, Wm. P.	New Mexico.
Campbell, Emma	Riley.
Campbell, Ettie A.	Riley.
Campbell, Fannie	Riley.
Campbell, May	Riley.
Campbell, Wm. A.	Riley.
Child, Ella	Riley.
Clark, Anna C.	Riley.
Cole, Fannie J.	Riley.
Copley, Albert	Jefferson.
Cotton, Fred L.	Wabaunsee.
Cotton, Katie H.	Wabaunsee.
Crowl, Jessie C.	Pottawatomie.
DeForest, Rodman A.	Nemaha.
Dutcher, Matie	Riley.
Elliot, Willard S.	Riley.
Ellsworth, Miles	Atchison.
Ernst, Wm.	Lyon.
Esdon, Maggie	Riley.
Failyer, Geo. H.	Cherokee.
Failyer, Mariam	Cherokee.
Failyer, Miriam	Cherokee.
Fawley, Abram	Davis.
Fields, Wm. H.	Riley.
Fletcher, Ellen	Riley.
Fletcher, Hannah	Riley.
Fraunberg, Wm. S.	Labette.
Freigh Jno. H.	Cherokee.
Gist, Jno. M.	Brown.
Gist, Owen	Nemaha.
Glossup, Lydia	Riley.
Godfrey, Albert N.	Lyon.
Gregg, Mollie B.	Riley.
Griffing, Jno. S.	Riley.
Griffing, Wm. J.	Riley.
Haines, H. F.	Riley.
Harvey, Henry	Sedgwick.
Haun, Jno. E.	Harvey.
Hopkins, Sam'l D.	Davis.
Houston, Grant U.	Riley.
Houston, L. N.	Riley.
Howard, Giles P.	Riley.
Howard, Walter C.	Riley.
Hoyt, Emma	Riley.
Hoyt, Fred O.	Brown.
Hicks, Jno. H.	Three Oaks, Mich.
Huling, Orlando D.	Cherokee.
Humphrey, Carrie E.	Davis.
Humphrey, Louis E.	Riley.
Hurlbut, Jannette	Labette.
Houston, Hortense	Riley.
January, Charles	Bedford, Iowa.
Jones, Carrie L.	Wabaunsee.
Kay, Jennie A.	Pottawatomie.
Keller, Milton W.	Davis.
Keller, Virgil E.	Riley.
Kimble, Martha	Riley.
King, John	Marshall.
Knapp, Frank	Miami.
Knipe, Geo. D.	Riley.
Knipe, Lucy A.	Riley.
Knostman, Amelia	Riley.
Knostman, Emma	Riley.
Kroenke, Carl	Riley.
La Tourrette, Jas. F.	Colorado.
Leasure, Marion F.	Linn.
Lewis, Ira H.	Labette.
Lynch, Fred E.	Cherokee.
Lynch, James H.	Cherokee.
Mails, Chas.	Pottawatomie.
Mails, Jennie E.	Pottawatomie.
Mann, Jno.	Riley.
Marlatt, Willie B.	Crawford.
McClanahan, S. L.	Riley.
McConnell, Chas.	Riley.
Meacham, Mary A.	Lyon.
Morgan, Sam'l M.	Riley.
Neal, Cora A.	Riley.
Parker, Mary G.	Riley.
Parish, Emma	Riley.
Parkerson, Fannie R.	Riley.
Parkerson, Freeman	Riley.
Patee, Henry E.	Riley.
Peckham, W. H.	Riley.
Perry, Geo. H.	Riley.
Platt, Augustus H.	Riley.
Platt, Geo.	Riley.
Powell, Omar	Marshall.
Rathbun, Phebe	Riley.
Rhoades, Anna H.	Pottawatomie.
Robertson, Mary J.	Jewell.
Roper, Nida	Riley.
Rushmore, Harry C.	Jefferson.
Ruland, Frank C.	Butler.
Shaw, James	Riley.
Shofe, Ella B.	Riley.
Snyder, Ella	Doniphan.
Snyder, Gussie	Doniphan.
Todd, Irving	Riley.
Travelute, Charles F.	Marshall.
Ulrich, Corinna	Riley.
Ulrich, Wm.	Riley.
Ward, Stanley M.	Ellenville, N. Y.
Waters, Eben	Labette.
Whiting, Fairy E.	Riley.
Weeks, Joseph	Phillips.
Willey, Ida	Cherokee.
Williamson, J. E.	Shawnee.
Williamson, Lizzie	Royal Center, Ind.
Williston, Carrie	Riley.
Williston, Frank H.	Riley.
Wilson, Amos E.	Dickinson.
Winder, Ivaloo	Washington.
Winne, Ella M.	Riley.
Winne, Jno.	Riley.
Wood, Arlie	Labette.
Woodman, Agnes M.	Riley.

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 2, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Melons on ice at Briggs'. 19-2

134 students now enrolled.

Ice cream daily at Briggs' at four P. M. 19-2

Grapes! Grapes!! Grapes!!! At Briggs'. 19-2

The industrial departments open Monday.

Briggs' is the only place in town where you can get a good cold soda or lemonade. 19-2

Several of the students have been at work this week clearing up the litter around the new buildings.

The city schools of Manhattan opened last Monday, with a full attendance. Mr. Darius Hungerford is again principal.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

Four gentlemen students can obtain board at Mrs. Pound's on College Hill, near the old College building, at \$3.50 per week. Other questions answered upon application.

In another place may be seen the list of students now in attendance at the College. While many new names appear, yet those acquainted with old students will see some familiar ones.

Dr. Perry, residing in the northeast part of Manhattan, desires some boarders. Students wishing to reside in the city will find this a convenient location. Ladies conveyed to and from College in bad weather.

The Board of Regents are in session to-day. Governor Salter and Capt. Folks took a walk through the industrial departments this morning, and spoke in praise of the improvements made during vacation.

Mrs. Jaquith lives in a square, stone house, about half way between Manhattan and the College, and she desires four boarders. Gentlemen preferred, but two ladies and two gentlemen, if acquaintances, would be taken.

We trust our readers will overlook the scantiness of editorial matter this week. The editors have all been too busy to even think of the INDUSTRIALIST. Next week, however, we feel sure that the rush of an opening term will be over, and our paper receive more attention.

Jasper Howard has been engaged to teach a nine months' school at Shawnee Center, Osage county, a few miles south of Topeka. Jasper has been attending the Normal Institute at Topeka for the last four weeks, is an energetic young man, and we trust will succeed in his new vocation.

The laboratory building will soon be ready for occupancy. The tables, shelves, seats, and various fixtures are being placed in position, and the painter is applying the finishing touches. To-day some of the students are moving the chemicals and apparatus from the old laboratory to the practice room in the new building.

Last year's students will remember Mr. Leslie Smith, his severe sickness, and consequent departure from College last spring. We received a letter from him a few days ago, in which he enclosed the "collaterals" for one year's subscription to the INDUSTRIALIST, and said he hoped to be here next winter.

Last Wednesday and Thursday were certainly as warm days as this summer has produced. The heat became so intense Thursday afternoon that the workmen on the horticultural building were compelled to abandon their work for the day. A rain Thursday night cooled the atmosphere and laid the dust, and we challenge any one to improve upon the weather of yesterday and to-day.

This week's Nationalist contains the following items regarding the College:

Mrs. Lynch has moved here for the purpose of educating her boys, and has rented a part of the Mails' building over the County Clerk's office.

Town is full of students. There are a large number here for the first time, and a large number of old students who have returned. The graduating class will be large next year.

The attendance at the College, the present term, is larger than it has been before so early in the term. Of course the Faculty feels greatly encouraged. Everything is harmonious, and the prospect for a good year's work is very flattering.

While the passenger train was delayed at Manhattan, last Thursday, a large number of travelers improved the time by visiting the Agricultural College. Some very commendable improvements are being made on the farm, among which we noticed several new buildings in process of erection and completion, all of which are creditable to the management. There is a fine lot of swine, and a herd of first-class Devon, Jersey and Short-horn cattle on the farm. The Second Duke Jubilee, three years old, weight nineteen hundred pounds, and Collegian, eight months old, weight seven hundred pounds, are excellent stock — and Grace Young 4th, and 5th, are both fine Short-horns. Glencoe and a cow and calf, are perfect Jerseys. We would be glad, if space permitted, to give an extended account of our visit about the farm and buildings. The visitors are indebted to Regent N. A. Adams and Prof. Gale for courtesies.—[Kansas Gazette].

Below will be found the representation of students from counties and States:

COUNTIES.			
Atchison	3	Linn	1
Brown	2	Lyon	3
Butler	1	Marshall	3
Cherokee	8	Miami	1
Cloud	1	Nemaha	2
Coffey	1	Osage	1
Crawford	1	Phillips	2
Davis	6	Pottawatomie	6
Dickinson	1	Riley	*66
Doniphan	2	Rice	1
Harvey	1	Shawnee	1
Jefferson	2	Sedgwick	1
Jewell	1	Washington	2
Labette	5	Wabaunsee	3
*29 of these from Manhattan.			
STATES.			
Colorado	1	New Mexico	1
Indiana	1	New York	1
Iowa	1		

Counties, 28; States, 5; students, 134.

Students' Column.

Ice cold soda at Briggs'. 19-2

The students have re-organized the Bluemont Base-ball Club, with John S. Griffing as President, and Irving Todd as Secretary. The practice ground is situated in the vacant field east of Prof. Platt's house. The boys say there is some good base-ball material among the new students.

The Webster Society met in the Telegraph Hall last Saturday evening. The election of officers was postponed one week. Among the old members present we recognized the familiar faces of Joe Williamson and Harry Rushmore. The following question will be discussed to-night:

"Resolved, That the Indians are justifiable in their hostilities." Some sharp-shooting may be expected.

Yesterday afternoon the Alpha Beta Society met in Telegraph Hall, with fair attendance. Mr. Stanley Ward and Miss Ida Willey were recommended for members of the Society, and Miss Lucy Knipe was elected a member.

The election of officers for the ensuing term resulted as follows: President, Wm. Ulrich; Vice-President, Miss Ella Child; Recording Secretary, A. A. Stewart; Corresponding Secretary, J. S. Griff-

fing; Treasurer, Miss Mariam Failyer; Marshal, W. C. Howard. The question of a herd law in Riley county made a lively debate, for it is a leading issue. After an interesting and able discussion the decision was in favor of the herd law. An essay upon "Constancy" was well-written and read by Miss Mariam Failyer, and Wm. Ulrich read a selected article entitled "Sanity."

On motion the publication of the Gleaner was renewed and Mr. W. Ulrich and Miss Ella Child were appointed as editors. On motion a committee was appointed to arrange for a moot-court at some time in the near future.

The following question will be debated next Friday: "Resolved, That language is the invention of man." Messrs Ulrich, Griffing and Miss Mariam Failyer will conduct the affirmative, and Messrs Haun, Elliot and Failyer have the negative.

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan. 37-3m

Clother.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The Fall Term began Thursday, August 24th, 1876.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufacturing of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which 95 cents will be paid, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegaph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

Eagle, Wichita City. Weekly; terms, \$2 per year. M. M. Murdock & Bro., Publishers.

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Ledger, Elk Falls. A Republican weekly. \$1.50 a year. A. Reynolds, Editor and Proprietor. 9-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

Chronicle, Lyndon. Official county paper. Republican; \$2 a year. W. T. Chalfant, Editor and Proprietor. 11-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibberts & Co. 16-1m

Young Cherokee, Cherokee. A Republican paper, published every Saturday. \$1 per year. H. H. Webb, Editor. 10-1m

C

Traveler, Arkansas City. C. M. Scott, Publisher. Full report of the border and Indian lands. \$2 a year; \$1 for six months. 8-1m

Register, Iola. Only paper published at the county seat of Allen county. Republican; weekly. Allison & Perkins, Publishers. 8-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Leader, Cottonwood Falls. Official paper of city and county. The Leader is not a real estate paper. \$1.50 per year. W. A. Morgan, Editor and Proprietor. 8-1m

Tribune, Lawrence. Daily, \$8; weekly, \$1.50 per annum. Independent Republican. Established Oct. 15th, 1854. John Speer, Editor. Speer & Covel, Publishers. 11-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. A. G. McBride, Editor. 10-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

Courier, Seneca. Devoted to the prosperity of Nemaha county. Immigrants invited to call at headquarters. \$2 a year. West. E. Wilkinson, Editor and Proprietor. 9-1m

Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$5; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

Republican, Ottawa. Republican in politics. Circulation 1600, with low advertising rates. Subscription, \$2. A. T. Sharpe, Publisher and Proprietor. 8-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Blade, Wamego. Don't read this until you send for a sample copy of the Blade, the leading local paper of Pottawatomie county. R. Cunningham & Co., Publishers. 6-1m

Independent, Oskaloosa. Established in 1860. Is in a flourishing condition, with a steadily increasing circulation. Edited and published by J. W. and F. H. Roberts. 6-1m

Sun, Parsons. Leading journal of southern Kansas. Do you want to know all about Kansas, subscribe. \$2.00 per year. Address, Reynolds, Giford & Winter. 6-1m

Advance, Chetopa. Is the leading weekly of southern Kansas. Circulation, 1,000. \$2.00 per annum. Reliable news about Indian Territory. J. M. Cavaness, Editor. 6-1m

Union, Junction City. A Republican weekly newspaper, published at the county seat of Davis county. Geo. W. Martin, Publisher and Proprietor. \$2 a year in advance. 11-1m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis." \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor.

Gazette, Peabody. Largest and best advertising medium in Marion county. Its motto, "Truth and the Almighty Dollar." \$2 a year. John P. Church, Editor and Publisher. 8-1m

Pioneer, Smith Centre. Only paper in Smith county. Established in 1872. Devoted to the interests of northwest Kansas. \$1.50 per year. Will D. Jenkins, Editor and Proprietor. 8-1m

Monitor, Jewell Centre, \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

Dispatch, Hiawatha. In its seventh year. Official paper; organ of the staunch old Republican party. Thoroughly established; home print. \$2 a year. A. N. Ruley, Publisher and Proprietor. 8-1m

Gazette, Enterprise. A 40-column quarto. Independent Republican. Devoted to the financial interests of the publisher and the general good of the people. V. P. Wilson, Editor and Proprietor. 10-1m

Citizen, Fredonia. Established 1870. Circulation 828 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Journal, La Cygne. Saturdays. Republican 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc.

Printing!—Daily instruction and drill in the work of a First-Class Printer. The Literary Departments offer a thorough education in the construction and use of the English Language, as employed by the Proof-Reader; in Book-Keeping; and in Industrial Drawing, as the best developer of that taste necessarily exercised by every good Job Printer. The Printing Department is well furnished with all the facilities for a speedy mastery of the art of Printing, and is in charge of a practical printer. Besides regular class instruction in printing, the weekly publication of the INDUSTRIALIST by the Department furnishes advanced students the requisite drill in newspaper work.

KANSAS STATE AGRICULTURAL COLLEGE.

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Manhattan, Kansas.

FACULTY.

J. A. ANDERSON, Pres. and Prof. Polit'l Economy.
M. L. WARD, Prof. Mathematics.
J. S. WHITMAN, Prof. Botany, Entom., and Geol'gy.
WM. K. KEDZIE, Prof. Chemistry and Physics.
E. M. SHELTON, Prof. Prac. Agricul., Sup't Farm.
E. GALE, Prof. Horticulture and Sup't of Nursery.
J. E. PLATT, Prof. Ele'm'y English, Mathematics.
A. TODD, Sup't Mechanical Department.
A. A. STEWART, Sup't Printing Department.
W. C. STEWART, Sup't Telegraph Department.
MRS. M. E. CRIPPS, Sup't Sewing Dep't.
MRS. M. L. WARD, Teacher of German and French.
MRS. H. V. WERDEN, Teacher of Inst'm'l Music.

THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life.

The Farmer's Course is the leading one of the Institution. In the other courses, the special studies are equally determined by the requirements of the proposed vocation.

MECHANIC'S.

To Mechanics, in addition to those studies of the Farmer's Course which are useful to the student in his proposed vocation, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

WOMAN'S.

The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term begins Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. Anderson,
President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, SEPTEMBER 9, 1876.

No. 21.

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English Spirit at the American Centennial.

Were all the articles displayed by English contributors suddenly withdrawn, there would be numberless great blanks along the endless aisles of the Centennial palaces. Men would then fully and vigorously realize the variety, wealth and magnitude of England's contribution to America's celebration of national independence of British rule. It is quite doubtful whether, were the situation reversed, America would have made any display whatever at England's celebration of revolt from American rule. And when, in addition to the force of national pride,—an article which John Bull rejoices in fully as much as does Jonathan—we remember the great expense of transportation, to say nothing of the time and trouble of exhibitors, thinking men will make a mental note of America's indebtedness to English contributors.

It is easy enough to say that in many cases these gentlemen have simply inserted a decidedly expensive, but very profitable, advertisement in the columns of the "World's Fair," and that the operation is only a wise business proceeding on their part—all of which is very true. But there are far more cases in which no such return could have been expected. For example, the embroideries made by Queen Victoria and displayed in the Woman's building are not for sale, neither is her Majesty about to engage in that branch of manufacturing. Her collection of paintings could not be bought for any sum. And the same is true of thousands of articles in the various departments, the presence of which can only be accounted for by a grand under-current of English rejoicing in American success.

Every now and then there is a "white-cap" of jealousy or wrath on the stream of our international relations; but below the surface there is a stronger current of mutual respect and affection than either nation realizes. And, speaking of manifestations of jealousy, we are quite as heavily engaged in that business as England is. If the London Times shall ever equal the New York Herald in the majestic impudence and burn-

ished brass of its utterances on international questions, it will have to employ American editors.

England's display at Philadelphia, when one counts all its cost and realizes the circumstances under which it has been made, is a truer exhibit of England's real spirit toward us than are all the words, articles and books that have been issued during the past century; and as such it will be accepted and prized by Americans in years to come. The following extract is from a paper read before the "Manchester Society for the Promotion of Scientific Industry," Earl of Derby presiding, May 14th, 1875, by Dr. John Anderson, Fellow of the Royal Society of Engineers, who for thirty years had charge of the Woolwich Arsenal. No man stands higher in England, or deserves to stand higher, for sturdy integrity and ability as a civil and mechanical engineer. He has been a Judge at each of the World's Fairs, and was chairman of Group XXI. at Philadelphia. The following paragraphs conclude a scientific paper prepared for an English audience, not an American one; and all the more naively show the spirit which animated the gentlemen who, many months ago, were working up the British section of the American Centennial:

From the distinguished position that Manchester occupies as a great tool-making centre, it will naturally be expected that everything displayed at your Exhibition will be the very best of its kind in order to maintain your reputation before the world. The first Exhibition of the same nature of which we have any definite account, took place between two and three thousand years ago. The class of articles there exhibited consisted of "white, green and blue hangings, fastened, with cords of fine linen and purple, to silver rings and pillars of marble; gold and silver bedsteads, with pavements of red blue, white and black marble." We read that it was kept open for six months, and at the conclusion a grand banquet was given which lasted for seven days; to this feast were invited all the princes and nobles, as well as the people from one hundred and twenty-seven Provinces. The wine was supplied from the Royal Palace, and all drank out of vessels of gold, each goblet being of a different pattern. The Official Report is contained in the first chapter of the Book of Esther. Although modern Exhibitions may not contain such profusion of wealth and magnificence, nor commend themselves to the minds of the æsthetical by having each article of a different pattern, and, therefore, only at the command of the very wealthy; still they contain that which is immensely better, the tools whereby the necessities and even the luxuries of life

are put within the reach of people generally, who, equally with the rich, can enjoy the comforts and elegancies of civilized life. Such things in the working man's home tend to refine the character, to increase self-respect, and to make little earth a happier world to live in. Besides, your tools and machinery are not only well-springs of civilization, but still more especially they mitigate the toil of countless millions of the human family. Considered in all their bearings, tools are a mystery; they help to dilute the poison in the sting of the primeval curse, and in some measure to restore to man a small portion of his original birth-right.

In conclusion, Her Majesty's Government having accepted the invitation of the President of the United States of America, to take part in the International Exhibition, to be held at Philadelphia in 1876, in connection therewith they have charged me with the formation of a suitable representation of our general machinery in the British section. A number of concurring circumstances render it very desirable that we as a nation should strenuously do our best in supporting the Government on this particular occasion. No doubt the world is becoming tired of the expense of such gatherings, but this is not the time for us to withhold the sacrifice. In my opinion it is our duty to make such a representation of our machinery as will be commensurate with our reputation; to be thoroughly national both as regards extent and quality, an object which can only be accomplished by the hearty and patriotic co-operation of the leading firms. Having had the honor of being a juror at the International Exhibition at Vienna in 1873, the fact was deeply impressed upon my mind that we cannot afford to hang back at these universal competitions, for even when we have put forth all our best skill and energy, it will be just as much as we can do to hold our own. By holding back we shall lose our vitality and cease to occupy our present position as engineers before the world; and, notwithstanding the trouble and expense, our national prosperity will be advanced by a liberal policy.

The argument that we shall have our best designs copied cuts both ways. The Americans do not come short in the faculty of invention, and we are just as likely to take lessons from them as they are to copy from us. Having spent several months in America for the purpose of examining their machinery in 1854, when our small arm factory at Enfield was being organized, I was unable to resist the conclusion that as a people they have an extraordinary inventive genius whenever the necessity calls it forth. The gun stock machinery at Enfield is a notable example. My impression is that our machine-makers will learn much by the friendly competition with America.

An objection is naturally raised against the enormous tax which the Americans have put upon imported machinery. That

[Concluded on fourth page.]

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 9, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Practical Education.

The real value of an education to the student depends upon two things, first, the practical worth of the knowledge taught; and, second, the degree in which he makes it his own. Hence, the ability of any Institution to give a practical education depends upon the kind and aim of the knowledge it teaches, and upon the thoroughness of the instruction therein. So that the value of the education which it offers may be fairly judged by the character of the "Course of Instruction" it follows.

The State Agricultural College was directly endowed by Congress, and is sustained by the State, for the distinct purpose of furnishing a practical education, that is, "one fit for use," to the industrial classes of Kansas. As its name indicates, and as the statistics of the industries of the State show, its chief work must be that of giving a useful and usable education to those who will engage in farming; and, therefore, the Farmer's Course must, from the nature of the case, be its main course.

We present herewith the course of study which, after three years' thought and testing, has been adopted by the Regents as our leading one. It is substantially as framed in 1873, the only modifications being those necessitated by the qualifications of students entering, and by the re-organization of the departments of instruction:

FARMER'S COURSE.

THIRD YEAR.	SECOND YEAR.	FIRST YEAR.	
		FALL. 1. Drill in English. 2. Drill in Arithmetic. 3. Drawing.	
		WINTER. 4. Drill in English. 5. Drill in Arithmetic, Book-Keeping. 6. Drawing.	
			FALL.
			1. Physiology. 2. English Structure. 3. Adv'd Arithmetic, Book-Keeping.
			WINTER.
			4. Practical Agriculture.
			5. Physics. 6. Drawing.
			FALL.
			1. Botany and Entomology. 2. Inorganic Chemistry. 3. Rhetoric.
			WINTER.
			4. Practical Horticulture.
			5. Organic Chemistry. 6. Algebra.

pupil acquires working skill in the use of the English language, and of figures and lines as mathematical tools, those sciences which have the most practical value for the farmer are taught as rapidly as their importance and thorough acquisition will permit. Studies numbered (1) in the Fall Term and (4) in the Winter Term, constitute the spine of the course; and as these, and all of the rest, are shaped and taught in this Institution, the curriculum as a unit forms one which we are ready to stand by, first as possessing the greatest value for the student, and, second, as ensuring the success of any agricultural college executing it. Had we space to state in detail what is here meant by Physiology, Practical Agriculture, Botany, Practical Horticulture, Chemistry, etc., the reader would more fully see the grounds upon which the above assertion rests.

In actual fact, the number of students received during our day who really purposed to become mechanics, and, therefore, who were justly entitled to a special course preparatory thereto, has been relatively very small. In view of this fact, and of the present resources of the Institution, together with the adaptedness of the leading course to the wants of the intelligent mechanic, it has been found practically unnecessary to diverge from the main course in the earlier years. The distinctively mechanical studies have been, and can at any time be, substituted for some in the fifth and sixth years in such cases, just as are the distinctive branches of Chemistry. But the course as it stands, and in the order of its standing, will be followed by all male students, except in very exceptional instances.

WOMAN'S COURSE.

THIRD YEAR.	SECOND YEAR.	FIRST YEAR.	FALL.
		FALL. 1. Botany and Entomology. 2. Inorganic Chemistry. 3. Rhetoric.	1. Drill in English. 2. Drill in Arithmetic. 3. Drawing.
		WINTER. 4. Practical Agriculture.	WINTER.
		5. Physics. 6. Drawing.	
			FALL.
			1. Physiology. 2. English Structure. 3. Adv'd Arithmetic, Book-Keeping.
			WINTER.
			4. Practical Horticulture.
			5. Organic Chemistry.
			6. Household Economy and Drawing.
			FALL.
			1. Botany and Entomology. 2. Inorganic Chemistry. 3. Farm Economy and Drawing.
			WINTER.
			4. Practical Horticulture.
			5. U. S. History.
			6. Drawing.
			FALL.
			1. Physiology and Entomology. 2. Inorganic Chemistry. 3. Farm Economy and Drawing.
			WINTER.
			4. Practical Horticulture.
			5. U. S. History.
			6. Drawing.
			FALL.
			1. Moral Philosophy. 2. Logic. 3. French, German, or Drawing.
			WINTER.
			4. Advanced Physics. 5. U. S. Con., History, Pract' Law. 6. Trigonometry and Surveying.
			FALL.
			1. Moral Philosophy. 2. Logic. 3. French, German, or Drawing.
			WINTER.
			4. Mental Philosophy. 5. Butler's Analogy. 6. French, German, or Drawing.

It will be seen that so soon as the

males, and the Woman's Course is prepared expressly for their liberal and practical education. We have no doubt whatever that practical men and women, who understand what it means and what it seeks to do, will fully endorse it. In one or two points it is not yet finally developed, but will be as rapidly as our facilities enable. It, also, will be followed as presented.

These courses, supplemented by the various industrial departments, qualify the Agricultural College for imparting an education "fit for actual use" that cannot be elsewhere obtained by the industrial student.

An Apple Orchard.

Although Kansas has several times taken first prizes for her displays of fruit, when the best fruit States in the Union were her competitors, yet the statement that Kansas is a failure as a fruit-growing State is by no means of unfrequent occurrence. The climate and soil of our State being so widely different from that of eastern States, horticulturists could learn only by experience what fruit was best adapted to this climate, and most profitable to the producer. Evidence is already being furnished by the practical fruit men of our State, which proves conclusively that Kansas is destined to become one of the greatest and best fruit-producing States in the Union.

Last Tuesday, in company with a friend, we visited the great apple orchard, three miles east of Manhattan, belonging to Mr. Welcome Wells. A stroll through the premises with him elicited the following facts:

The orchard was set out in 1866, covers about forty acres, and is surrounded by two rows of hedges, between which—on the west, south and east sides—are four rows of maples and walnuts, and on the north side, two rows of cedars. The hedges and trees serve the purpose of a wind-break as well as fence, and it is claimed are indispensable to successful fruit culture. In the eastern portion of the orchard, are several rows of Fameuse, Winesap, Jonathan, Rawles' Genet, Ben Davis, Fulton, Maiden's Blush, Broadwell Sweet, Willowtwig, Bellflower, and Rome Beauty; and one row each of the Missouri Pippin, Winesap, Maiden's Blush, and Cooper's Early White, that were young trees. The west side of the orchard contains apples, pears, plums, crabs and asparagus. Among the apples are the Grammar Pearmain, Lowell, Yellow Bellflower, Holland Pippin, White Winter Pearmain, Swaar, Gloria Mundi, (or, as the boys call it, "Glorious Humbug,") Rambo, White Bellflower, and Talman Sweeting.

We have now hastily gone through this orchard, let us sit down under the shade of one of the trees and converse with Mr. Wells for a few moments.

Reporter—What are your ideas in regard to pruning?

Mr. Wells—Prune little. We can't prune here as they do East. There they trim for sun and air; we get too much here without that trouble. You noticed the effects of high pruning in that broken-down tree yonder. Sun-scald has killed nearly all its limbs. Most of these trees are headed low, and thus their trunks are protected. An experiment has proved that a tree headed eighteen inches from the ground

Nearly one-half of our students are fe-

produced more apples than one headed three feet from the surface of the earth.

R—Give me the names of some of your best apples.

W—In my estimation, the White Winter Pearmain is the best-flavored apple that grows. The fullest tree I have belongs to that variety. The Grammar Pearmain is a good apple, though rare in this country. My trees of this variety have borne every year since the first except the grasshopper years of 1874-5. The Swaar and Rambo are both good apples and do very well here. Some of my Cooper's Early White trees have brought me \$16 a tree in one year. The Bellflower does not prove a success for some reason.

R—Do you consider the birds a friend to the horticulturist?

W—Yes, sir. The orchard has been full of turtle-doves. They have eaten some fruit, of course, but the loss is nothing compared to the gain. You see how free the apples are from worms and specks; all remarkably clean and of good color.

R—Should the grasshoppers come would they damage you greatly?

W—No; I hardly think they would harm me much. It is too late. They may remove the foliage and thus slightly injure the late apples.

R—You deal mostly in apples, I see.

W—Yes. I have a few plums, crabs and peaches; also some pears of the Bartlett, Flemish Beauty and Douchess varieties.

R—What do you do with that asparagus?

W—That little plat you see there brings me \$50 a year. Some of it I sell in Manhattan; the remainder I ship west.

R—Mr. Wells, may I ask what you expect to realize from your orchard this year?

W—I will probably have about 4,000 bushels of apples, which, if nothing happens, will bring me \$1.50 per bushel. Have sold \$700 worth in Manhattan in the last two months, and could have sold twice as many more. I bargained my place to a man last year for \$11,000. Will realize half that from it this year.

R—Have you sent any fruit to the Centennial?

W—I shipped a barrel of assorted apples last Saturday. Very fine collection, I thought.

R—I observed some bees near your house. Does it pay to handle them.

W—Oh yes, at least it has paid so far. I bought two swarms of bees last year at five dollars each, and now have ten swarms. Will take two hundred pounds of honey from them. They feed on the apple blossoms in the spring, and I raise buckwheat for them in the summer and fall.

Mr. Wells has had many obstacles to overcome in raising this orchard, and justly feels proud of his success. Fifty-nine persons visited him in one afternoon this week. We cannot close this article without expressing the wish that our farmers would give more attention to fruit culture, and the best methods of insuring success. Mr. Wells and his men will please accept thanks for all courtesies extended. May their trees always be loaded with apples.—[A. A. Stewart.

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 9, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East.....	10:40 A. M.
Going West.....	3:52 P. M.

FREIGHT ARRIVES.

Going East.....	12:20 A. M., and 11:35 P. M.
Going West.....	5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER. Agent.

Number of students enrolled this term, 145.

Prof. Whitman will teach the Lyndon, Osage county, school this winter.

A g-hopper has just entered the office and choked to death on an italic period.

Mrs. Ella M. Kedzie has been employed as teacher of Industrial Drawing in this Institution.

Since the list of students on the fourth page was printed, Mr. John W. Beck, of Berlin, Riley county, has been enrolled.

We forgot last week to acknowledge calls from G. W. Harrop, our enterprising druggist, and Mr. J. H. Downing, editor of the Star, of Hays City.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

The Board of Regents held a very pleasant and satisfactory meeting last week, at which much important business was transacted. The appropriations made by the last Legislature were fully considered, and in each case there was an unexpended balance, which the Executive Committee was directed to expend as provided. Associate Justice D. J. Brewer, of the Supreme Court, was invited to deliver a course of twelve lectures on Practical Law during the ensuing collegiate year.

Going down to the threshing machine one of the hottest afternoons of this week, in search of a cool item, we found Prof. Shelton with the students pitching sheaves and sweating after a fashion that refrigerated us. From eighteen acres of wheat he has 346 bushels, or more than nineteen to the acre, and if anybody in this neck of woods can show a better yield, we would like to know it. From six and a half acres of barley he has 205 bushels, or thirty-one and a half to the acre,—concerning which we rise and remark as above.

The "Industrials" for male students are the Farm, Nursery, Carpenter, Wagon, Iron, and similar shops. In these no charge is made either for tuition, or for tools and material. The "Industrials" for women are the Sewing, Telegraph, Printing, Carving, Instrumental Music, and similar departments. These are freely open to female students and no charge of any kind is made except in that of Instrumental Music. Hereafter, male students taking Printing or Telegraphy will be charged one dollar per month for the use of material and instruments.

One hundred and forty-five students have been enrolled and assigned to classes, at the close of the second week of the present term. This is a larger number than has ever been received at the same time of year. At the end of the second week last year one hundred and twenty-nine students were in attendance, and at the end of the third week there were one hundred and thirty-eight; so that the present session shows a decided gain. For the purpose of comparison, we give the number enrolled during the whole of the same term of previous years, that is, from August to January; and as we are only in the second week, with September, October, and November "to hear from," the probabilities are certainly encouraging: 1873, from September 11th to December 20th, 159; 1874, from August 20th to December 17, 117; 1875, from August 26th to December 23d, 177.

Students' Column.

The base-ball boys played a practice game last Tuesday afternoon. At the close of the eleventh inning the score stood, 20 to 21. Our club will be heard from next spring.

The masons are building the gables to the horticultural building, after the completion of which the familiar sound of the trowel and hammer, and the piercing shrieks of the workmen for "more mortar," will be "heared" no more.

Miss Belle Pound has returned to Manhattan, accompanied by her mother and little brother. Neither the beautiful scenery of the mountains nor the enchantments of city life, could allure them from their old associations and the little cottage on College Hill.

At the meeting of the Alpha Beta Society yesterday afternoon, Mr. Stanley Ward and Miss Ida Willey were elected members, and Mr. Geo. H. Perry was installed. "Resolved, That church property should be taxed," is the next question for discussion. Visitors always welcome.

Miss Josie Harper will soon start for Monticello, Illinois, where she expects to attend a seminary. Last evening quite a number of her young friends spent a few hours very pleasantly at her home. Miss Josie has many warm friends in this Institution—where she has proved herself a faithful student—who regret her departure, but wish her success.

Last Saturday evening the Webster Society met and organized. The following is the result of their balloting, which was spirited and orderly: President, J. E. Williamson; Vice-President, M. F. Leasure; Recording Secretary, H. C. Rushmore; Corresponding Secretary, F. O. Hoyt; Treasurer, J. King; Critic, M. F. Leasure; Librarian, J. E. Williamson; Marshal, C. F. Travelute; Directors, Leasure, La Tourrette, Hoyt, King and Williamson; Reporter, Williamson.

The Society then discussed the Indian question after the manner of genuine Websters. The judges decided that the Indians have good reasons for their hostilities. They adopted the following question for this evening: "Resolved, That the Powers of Europe would do right to aid the rebellious States of Turkey."

Several persons were recommended for membership, whose petitions will be voted upon this evening, after the inauguration of officers. All are invited to come and see the elephant. JED.

Township Books, Poor Records, Estray Records, Poll Books, Official Records, furnished by the Kansas Publishing House, Topeka.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf GEO. W. MARTIN Publisher

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms have been fitted up in a comfortable and attractive style.

[Concluded from first page.]

tax is much to be regretted in every respect, and must be exceedingly detrimental to American interests as well as our own. Seeing, however, that we ourselves are but one generation out of the same error, we can easily understand the mistaken notions by which the protective party are influenced. At the same time, let us remember that there is in that country a large party who hold our free-trade views, whose hands we will greatly strengthen by going to America and ticketing our machines with British prices. It will have an educating effect on the American mind, more especially on the machine-purchasing part of the community, who will thereby see the enormity of the tax, and be led to the conclusion that it would be cheaper for them even to subsidize their own makers than not to have our machinery duty free.

There are, however, other and higher reasons why we should endeavor to make a good impression upon America next year. By going in our strength we shall thereby show them that the events of a hundred years ago have left no bitter rancor eating into our hearts; that so far as we are concerned the breach is long since healed, and that bygones are bygones. Like ourselves, the Americans are a high-spirited nation, and are extremely sensitive in regard to such matters, much more so than an older nation. Solomon has wisely said, "a man that hath friends must show himself friendly." It is the same with nations; by going in our best dress they will not fail to recognize the compliment which we have meant to pay them; they will feel proud of the old folks at home, and of the grand old stock through which they came. It is therefore greatly to be desired that every house of good standing should send at least one specimen of its best productions, if only for the honor of the old Flag. In general machinery, England was feeble at Vienna. The shortcomings of Scotland were still more apparent. Let both now endeavor to be true to Britain on the banks of the Delaware.

Students Enrolled Since Aug. 24, 1876.

NAME.	COUNTY.
Abbott, Frank C.	Riley.
Adams, Emma L.	Riley.
Bailey, Willie S.	Osage.
Boley, Mary B.	Pennsylvania.
Bayles, John	Riley.
Benjamin, Daniel A.	Atchison.
Benjamin, Emery W.	Atchison.
Bissell, Edgar	Phillips.
Blain, Arthur T.	Riley.
Blanc, Jno. H.	Coffey.
Briggs, Harry	Riley.
Brous, Frank D.	Riley.
Brown, Ada E.	Riley.
Brown, Cortez	Washington.
Brown, Mark L.	Riley.
Browning, Emma E.	Riley.
Buell, C. Stewart	Riley.
Burnham, Wm. P.	New Mexico.
Campbell, Emma	Riley.
Campbell, Ettie A.	Riley.
Campbell, Fannie	Riley.
Campbell, May	Riley.
Campbell, Wm. A.	Riley.
Child, Ella	Riley.
Clark, Anna C.	Riley.
Cole, Fannie J.	Riley.
Copley, Albert	Jefferson.
Cotton, Fred L.	Wabaunsee.
Cotton, Katie H.	Wabaunsee.
Crowl, Jessie C.	Pottawatomie.
DeForest, Rodman A.	Nemaha.

Delahay, Charles	Leavenworth.
Dutcher, Matie	Riley.
Elliot, Willard S.	Riley.
Ellsworth, Miles	Atchison.
Ernst, Wm.	Lyon.
Esdon, Maggie	Riley.
Failyer, Geo. H.	Cherokee.
Failyer, Mariam	Cherokee.
Failyer, Miriam	Cherokee.
Fawley, Abram	Davis.
Fields, Wm. H.	Riley.
Fletcher, Ellen	Riley.
Fletcher, Hannah	Riley.
Fraunberg, Wm. S.	Labette.
Freigh, Jno. H.	Cherokee.
Gist, Jno. M.	Brown.
Gist, Owen	Nemaha.
Glossup, Lydia	Riley.
Godfrey, Albert N.	Greenwood.
Gregg, Mollie B.	Riley.
Griffing, Jno. S.	Riley.
Griffing, Wm. J.	Riley.
Haines, H. F.	Riley.
Harvey, Henry	Sedgwick.
Haun, Jno. E.	Harvey.
Hopkins, Sam'l D.	Davis.
Houston, Grant U.	Riley.
Houston, Hortense	Riley.
Houston, L. N.	Riley.
Howard, Giles P.	Riley.
Howard, Walter C.	Riley.
Hoyt, Emma	Riley.
Hoyt, Fred O.	Brown.
Hicks, Jno. H.	Three Oaks, Mich.
Hughes, Frank	Leavenworth.
Huling, Orlando D.	Cherokee.
Humphrey, Carrie E.	Davis.
Humphrey, Louis E.	Riley.
Hurlbut, Jannette	Labette.
January, Charles	Bedford, Iowa.
Jarbeaux, Belle D.	Riley.
Jones, Carrie L.	Wabaunsee.
Kay, Jennie A.	Pottawatomie.
Keller, Milton W.	Davis.
Keller, Virgil E.	Davis.
Kimble, Martha	Riley.
King, John	Marshall.
Knapp, Frank	Miami.
Knipe, Geo. D.	Riley.
Knipe, Lucy A.	Riley.
Knostman, Amelia	Riley.
Knostman, Emma	Riley.
Kroenke, Carl	Riley.
La Tourrette, Jas. F.	Colorado.
Leasure, Marion F.	Linn.
Lewis, Ira H.	Labette.
Lynch, Fred C.	Cherokee.
Lynch, James H.	Cherokee.
Mails, Chas.	Pottawatomie.
Mails, Jennie E.	Pottawatomie.
Mann, Jno.	Rice.
Marlatt, Willie B.	Riley.
McClanahan, S. L.	Crawford.
McConnell, Chas.	Riley.
McQuary, J. Hollister	Saline.
Meacham, Mary A.	Riley.
Miles, Geo. W.	Texas.
Moore, Cassie J.	Shawnee.
Morgan, Sam'l M.	Lyon.
Neale, Cora A.	Riley.
Parker, Mary G.	Riley.
Parish, Emma	Riley.
Parkerson, Fannie R.	Riley.
Parkerson, Freeman	Riley.
Patee, Henry E.	Riley.
Peckham, W. H.	Riley.
Perry, Geo. H.	Riley.
Platt, Augustus H.	Riley.
Platt, Geo.	Riley.
Powell, Omar	Marshall.
Rathbun, Phebe	Riley.
Rhoades, Anna H.	Pottawatomie.
Robertson, Mary J.	Jewell.
Roper, Nida	Riley.

Rushmore, Harry C.	Jefferson.
Ruland, Frank C.	Butler.
Schroeder, Chas. E.	New York.
Shaw, James	Riley.
Shiner, Wm. Bee	Texas.
Shofe, Ella B.	Riley.
Snyder, Ella	Doniphan.
Snyder, Gussie	Doniphan.
Todd, Irving	Riley.
Travelute, Charles F.	Marshall.
Ulrich, Corinna	Riley.
Ulrich, Wm.	Riley.
Vincent, Ella E.	Riley.
Ward, Stanley M.	Ellenville, N. Y.
Waters, Eben	Labette.
Whiting, Fairy E.	Riley.
Weeks, Joseph	Phillips.
Whitney, Kittie	Riley.
Willey, Ida.	Cherokee.
Williamson, J. E.	Shawnee.
Williamson, Lizzie	Royal Center, Ind.
Williston, Carrie	Riley.
Williston, Frank H.	Riley.
Wilson, Amos E.	Dickinson.
Winder, Ivaloo	Washington.
Winne, Ella M.	Riley.
Winne, Jno.	Riley.
Wood, Arlie	Labette.
Woodman, Agnes M.	Riley.

The Annals of Kansas, by Daniel W. Wilder. Published by Geo. W. Martin, Kansas Publishing House, Topeka. Price \$5.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan. 37-3m

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The Fall Term began Thursday, August 24th, 1876.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, SATURDAY, SEPTEMBER 16, 1876.

No. 22.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application.

Address A. A. STEWART, Manhattan, Kas.

Boiled Down.

Millet is worth twelve dollars per ton.
Taxable property of Topeka, \$8,090,000.
Immigrant wagons rolling into Kansas.
Wichita has a \$5,000 Kentucky stallion.
Attendance at Centennial steadily increasing.
A difficult lock to pick—one from a bald head.
They have grasshoppers in Nebraska and Minnesota!

Atchison buys potatoes for twenty-five cents a bushel.

Wichita hasn't a vacant dwelling house, and is jubilant.

Texas wheat crop reported a failure; corn crop splendid.

Centennial buildings and contents are worth \$104,820,350.

A Lincoln county corn-field averages 90 bushels to the acre.

Either stop planting maple trees or stop the maple worm.

Thirty counties in Georgia are troubled with grasshoppers.

Sam Lappin is in Peru, and therefore safe from American law.

The biggest strike at the Centennial is the Kansas Exposition.

Five acres in Marshall county have yielded 325 bushels of oats.

Osborne claims to be the banner wool-growing county of Kansas.

An \$80,000 fire across the street from the Centennial Main Building.

Railroad tickets only reduced ten per cent from former rates. Thin!

Burlington takes 8,000 pounds of grapes from an acre and a half vineyard.

The Louisville Reporter rejoices in apples thirteen inches in circumference.

Barnum has secured the Kansas Centennial exhibit for display in Europe.

Wilder's Annals of Kansas has been re-published in London. Good for Web!

White Cloud had a peach four inches high, three in diameter, and ten in circumference.

Kansas corn crop estimated at 100,000,000 bushels, worth from \$30,000,000 to \$40,000,000.

A German colony has bought 5,000 acres in Coffey, Greenwood and Woodson counties.

Independence Tribune says Fultz and Orange wheat have averaged best this year, in that section.

The Lantern says that lightning has done more damage in Marshall county than the g-hopper this year.

To get rid of a cold, put nitro-glycerine up your nose and hit it with a sledge hammer. The cold will go away.

The thoughtful worm is beginning to engage quarters in the milky chestnut, with a view to fattening newsboys.

Wichita had a wheat crop drilled in both ways. Yield, twenty bushels per acre; sold for seed at one dollar per bushel.

And now the courageous husband prepares to wrestle with the kinky stove-pipe, and the plastering that won't hold a nail.

Kansas Supreme Court affirms decision against railroads, giving full value for stock killed, with attorney's fees for collecting the same.

Prof. C. V. Riley teaches Entomology at the Agricultural College this year, and Judge Brewer, of our Supreme Court, lectures on Practical Law.

Cutting and Curing Alfalfa.

There has been, and is yet, to some extent, a prejudice against alfalfa hay as a winter feed for stock, especially horses. The principal cause that gave rise to and kept up this prejudice is to be found in the fact that the farmers did not understand when to cut it, or how to cure it; or, perhaps, antecedent to either of these causes, we might mention another: that they did not know how to sow the seed. The seed was sown too thinly on the ground, and the plants grew large and coarse and woody. Then this coarse growth was allowed to stand before cutting till the plants had blossomed, and sometimes till the seeds had formed. In this condition the stems had become more like wood than clover hay, and the leaves had fallen off, leaving what was then called alfalfa hay, more like sticks than hay. Then, again, it was formerly the custom of farmers to allow this over-ripe grass to lie in the sun and dry till it had neither color nor nutriment in it, and till even the seed that had formed on it had shelled out. Experience with this hay has taught farmers many valuable lessons as to its management. First, they have learned that the seed needs to be sown very thickly on the ground, so that the stems of the grass will grow small and slender. Secondly, they have learned that the grass, to make good hay, should be cut just as it is coming into blossom, before, in fact, it changes its color from green to blue. Thirdly, they have learned that as soon as the grass is well wilted in the sun, it should be raked up into winrows, and then put into ricks and allowed to complete the curing in this condition. By cutting the clover while thus green, and treating it as thus indicated, the fresh, green color is preserved, the hay is kept in a soft and pliable condition, and all the nutriment is preserved, and the hay is relished and eaten by stock of all kinds with the same zest that they eat the fresh-growing clover. The hay, while in the rick, if put up as suggested, goes through a sweating process that changes the juices to starch and sugar, and that fastens all the leaves to the stem, so that in future handling none is lost. Alfalfa hay cut and cured in this way is actually more valuable for cows, horses or sheep than the best wild oat, or wheat, or barley hay that can be raised, and is a good feed to winter hogs on. If cut when too ripe, and cured in the sun, alfalfa hay is not worth as much as poor wheat or barley straw; in fact, it is hardly worth anything.—[Sacramento (Cal.) Union.]

A wheat thresher in Riley county says he gets more money for his work this year than last, which shows that money is plainer. He says winter wheat will average eighteen bushels per acre.

In Sumner county they have the Egyptian, wheat which resembles millet. The heads are ten to twelve inches in length, well filled with seeds, on stalks seven feet high. It is said to be an excellent forage plant.

Brain Farming.

The time is coming when the elementary principles of agriculture will be taught in our public schools. The time is coming when the sons of farmers, who are sent to institutions of learning to obtain a respectable education, will pay less attention to studying the Greek and Latin languages and the higher mathematics, and more attention to studying such authors as Liebig, Johnson, Silliman, Agassiz, etc. The learned professions are all filled to overflowing. Half the members cannot make a living. What now is wanted is an education to fit men for farming—to make the profession of farming as honorable and reputable as any other. If the members of the agricultural profession are as well educated and as well qualified, there is no reason why they should not fill important positions—which are now almost completely absorbed by the learned professions, as they are termed. It is true there is not much progress in this direction, but there is some. Let there be more. Let farmers be as well educated for their profession as other members are for their special professions. Farming will then become more profitable. Brain farming is increasing yearly. By and by we hope there will be no other, and that it will be educated brain at that.—[Colman's Rural World.]

The Ottawa Republican says: "There is a stalk of corn, of this year's growth, on exhibition at Law's drug store, which is 16 feet 5 inches high, and 9 feet 3 inches to the first ear. It was grown by Mr. Sanders, and he has forty acres nearly as large."

Edward Everett Hale says: "I do not believe that in practice, the well-educated woman needs to go through the same studies precisely with a well-educated man. But I do believe that what she learns she needs to know thoroughly. Whether she studies this thing or that thing, it is important that she should study to the bottom and learn it thoroughly well, so far as she learns it at all."

A Parisian editor, in his leisure moments, has made this ingenious calculation: Assuming that a good compositor handles 24,000 letters a day, and that his hand moves one foot with each letter in taking and setting the type, it will be seen that his hand travels 48,000 feet, or nearly ten miles a day, and in the course of a year, excluding Sundays, travels fully the distance from Paris to New York.

We copy the following from the Springfield, Mass., Republican:

More inquiry is reported for homes at the West during the last few weeks than has been known in this section for many years. Kansas seems to be the objective point with very many, owing, perhaps, to her splendid agricultural exhibit at the Centennial, and the extended mention it has received at the hands of the press generally.

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 16, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE Regents having been duly constituted corresponding editors of the INDUSTRIALIST, it is about time for them to send in articles.

Kansas at the Centennial.

It is impossible to determine the full effect of the Kansas exhibit at the Centennial upon the future growth of the State. No man can now estimate the extent and strength of the conviction driven into the minds of all classes of persons, from all quarters of the globe, by the products exhibited. There is no getting over the corn stalks, nor around the evidence of the grain. The energy which brought together so great a variety of all conceivable growths of field and orchard is irresistible. And even the stupidest dolt finds his semblance of a soul thickened and warmed by the artistic display as a whole. We more than once heard visitors exclaim: "Why, this is the poetry of agriculture!" Be the previous notion of the visitor respecting Kansas what it may, and he ordinarily has the "starvation" notion, no man can dispute the testimony of his own eyes or resist palpable facts. That building is full of facts—self-reliant, absolute, chuckling facts—facts grown by Kansas labor, collected by Kansas patience, transported by Kansas grit, arranged by Kansas taste, emphasized by Kansas eloquence. The iciest banker, the coolest farmer, and the shrewdest mechanic are alike penetrated by the logic of these facts.

Speeches are not always believed, and even the veracity of editors is sometimes questioned; but the story of the articles in that building cannot be denied or gotten away from. No tale which could be told, nor argument that could be made, is one-half so convincing, or a tenth so potent, as the voice of those crowding, multiform, rollicking facts! And they are bound to have a speedy and durable effect in causing the investment of large capital in Kansas, and the immigration of hundreds of thousands of workers to Kansas. By no other method or scores of methods could so much have been done towards correcting the erroneous impressions of our past loudly-trumpeted misfortunes, or towards fortifying against the advertising of future ones. Though hundreds of miles away, and seen by hardly one in a thousand of our population, no better or more effective work has any where been done than that on the banks of the Delaware. Kansas "crossing the Delaware," under Barnum's command, may be as fruitful in victories as was that of Washington.

Time-Table for Fall Term of 1876.

HOURS.	PROF. WARD.	PROF. KEDZIE.	PROF. SHELTON.	PROF. GALE.	PROF. PLATT.	MRS. WARD.	MRS. KEDZIE.	A. TODD.	A. A. STEWART.	W. C. STEWART.	MRS. CRIPPS.	MRS. WERDEN.
FIRST HOUR. 8:40—9:30.	Ancient History.	Household Chemistry.		Botany.*	Advanced Arithmetic.	Drawing.	Carpentry.	Printing.	Telegraphy.	Sewing.	Music.	
SECOND HOUR. 9:30—10:20.	Structure, Div. I.	Inorganic Chemistry.		Practical Agriculture.	Drill in English.	Drawing.	Carpentry.	Printing.	Telegraphy.	Sewing.	Music.	
THIRD HOUR. 10:20—11:10.	Structure, Div. II.	Mineralogy.		Physiology, Div. I.	Drill in Arithmetic.	Rhetoric, Div. I.	Carpentry.	Printing.	Telegraphy.	Printing.	Music.	
FOURTH HOUR. 11:10—12:00.	Moral Philosophy.	Agricultural Chemistry.		Physiology, Div. II.	Advanced Arithmetic.	German.	Carpentry.	Printing.	Telegraphy.	Sewing.	Music.	
FIFTH HOUR. 12:00—12:50.	Geometry.			Drill in Arithmetic.	Rhetoric, Div. II.		Carpentry.	Printing.	Telegraphy.		Music.	

* Prof. Riley lectures to this class on Entomology.

IT is very pleasant to get back to the exchanges again. Just what they have been doing to themselves we can't say; but somehow each one of them seems brighter, newsier and nervier than it did last spring.

EDITOR TODD has somewhat enlarged the News, at the beginning of a new volume; and very sensibly makes a charge to cover expenses of publication, namely, twenty-five cents per year. Success to Irving and the News.

TAKING the State as a whole, and comparing its financial condition with that of other States, the average Kansan enters the winter with less debt, larger crops, and better prospects than the average farmer or business man of the East.

No one pretends that Kansas has no agricultural drawbacks, but in what State is the farmer sure of each crop every year? Is it New York, Pennsylvania, Ohio or Missouri? Do the facts show it? Did the crops of 1875 and 1876 prove it? Are the farmers in these or any State, who started with the same capital, better off than Kansas farmers at the end of the same period?

The question is not whether this State has drawbacks, but whether it has more or fewer drawbacks than other States. A comparison of natural advantages, and, what is better, of the actual experience of farmers, will prove beyond a doubt that Kansas is, to say the least, as rich and safe a State for farming as any in the Union.

WE are just in receipt of the catalogue for 1876 of Shorthorn cattle, the property of Albert Crane, Durham Park, Marion county, Kansas. This catalogue is quite an immense affair, of ninety-one pages, in which are recorded one hundred and forty-six pedigrees. Further, it is embellished with twenty excellent likenesses of the choice things of Durham Park, from the sketch book of Mr. J. R. Page, the renowned cattle artist. Of the catalogue it will be sufficient to say that it is gotten up in good taste, with fewer than usual of the flagrant, provoking typographical errors so common in stock catalogues; and on the whole is quite worthy of the grand herd recorded in its pages.

The Messrs. Crane are the owners of one of the best herds, if not the best herd, in America, whether pedigree or individual merit be considered. We notice in the Bates portion of this herd, pure Duchesses, Kirk-leavingtons, Cambridge Roses, and Lady Marys, families which need only be offered for sale to bring fabulous prices from purchasers from the four quarters of the earth. In addition to the above, the "pure Booths," have several representatives in this catalogue, while of such sorts as Seraphinas, Louans, Rose of Sharons, Gwynes, J's, Miss Wileys and Young Marys, "well topped with Bates," there is a great profusion.—[Prof. Shelton.]

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 16, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Number of students enrolled this term, 152.

Some locals from the Nationalist crowded out.

Dr. Knapp, of the Insane Asylum, Osawatomie, paid the College a hasty visit on Monday.

Frank Burroughs is at San Antonio, Texas, earning fifty dollars a month jerking lightning.

The College library will be open from 2 to 3 P. M. on Mondays, and on Saturdays from 9 to 11 A. M.

The walls of the horticultural building are finished, and the masons are "pointing" the laboratory.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks. Address, E. Gale, Loan Commissioner, Manhattan.

We are glad to see that the State Grange is to meet in Manhattan next December, and trust that its members will make long and frequent visits to the Agricultural College.

Ed. F. Waring, a former student of the Agricultural College, is now in California, in the employ of the Western Union Telegraph Company. When at the College he took telegraphy for an industrial.

Mrs. Werden is soon to organize classes in music and painting in Manhattan. She has employed an assistant in the person of Miss Emma Curtis, of Chicago, who is to have control of the drawing classes.

Tuesday afternoon we received calls from Sam Kimble and J. D. White. Everybody knows Sam, and old students will remember Mr. White. The latter gentleman is practicing law in Atlanta, Rice county.

Everything in and about the College is running as smoothly as an oiled engine with a full head of steam. The classes are doing splendid work, and the Faculty are as chipper and busy as grasshoppers in Nebraska.

Since our last issue, the following students have been enrolled: Warren C. Buel, Wabaunsee; Logan Everhart, Labette; David Haines, Riley; M. Burt Hayes, New York; Alice Hibbard, Riley; Corwin J. Reed, Pottawatomie.

Prof. Kedzie's classes began recitations in the new laboratory this week, and the apparatus is trotting itself into permanent quarters as rapidly as possible. The Professor is in a high and happy state of delight, only affected by the inevitable confusion of things piled around promiscuously and not yet placed on their future shelves.

Many, undoubtedly, are not aware of the fact, but as we have made a microscopic investigation, we are prepared to assert, without fear of contradiction, that Sup't A. A. Stewart's mustache will be visible to the naked eye on or about the first of January.—[Enterprise].

After reading the above, we examined Stewart's face and find the Enterprise mistaken. The foundation and main wall of that mustache are visible now.

If there is anything we have longed for, it is the sidewalk to town, which is rapidly approaching completion. During the coming week Prof. Shelton's teams will put in the best finishing link on our grounds that circumstances at present permit. At this end of the line we are all exceedingly obliged to the Manhattan authorities for that mile of stone exaltation above mud.

And this is what Stewart rushed up and said: "That it was as good a job of press-work as had ever been done in the office; that Irving Todd and he did it; that almost every time, they would sing out for 'color' at the same instant; that it was 'pretty as a peach,' barring the intellectual quality of the matter in the 'Boiled Down' column." That was just after he had run off this outside, and you can see how it is yourself, provided you are a judge of press-work.

We clip from the Enterprise locals as follows:

A family, residing nearly a mile from the College, hearing some melodious music, was apprised of the fact that Prof. Platt's singing class was in full blast.

Several old students visited the College last week, and after looking around, were much astonished at the pleasing changes, and "did wish we could come back again."

The other day one of our students was making desperate efforts to shave himself for the first time. After beheading eleven pimples, and relieving himself of a small slice of cheek, he gave it up as a bad job. Said student is all O. K. now, with the exception of a sore eye, which was caused by taking too long a sight on his mustache.

Students' Column.

They will issue "wedding invitations." So all you need to do is rock yourself in an easy chair, and wait for an envelope, with the initial letters "G." "S." neatly stamped thereon.—[Enterprise].

Wonder if it wasn't a northeast "Gale" that blew the above into the Enterprise.

The members of the Young Men's Christian Association, at this Institution, have united with the young people of Manhattan in the organization of a Young People's Christian Union. The aim is to make this a permanent feature in the religious element of Manhattan; a society of which the young folks will be proud; a place where strangers who come here to College may go and feel at home; a union of young people for the diffusion of religious knowledge and "strengthening of the christian graces," without regard to sect or creed. We trust and believe that this movement will receive the approval of all religious persons, and will result in the accomplishment of much good.

The Websters had a glorious time last Saturday evening. When the order for extemporaneous speaking was announced, politics seemed to engross every member's thoughts. Mr. LaTourrette made the first speech. He spoke commendably of the Republicans, but contemptuously of the Democrats. His remarks were so animated and trenchant that he aroused every Democrat and Republican in the room. Mr. January followed him, and peremptorily contradicted him. He made a loud speech, and one calculated to make all speak their sentiments freely. Although he sawed the air as much as his opponent, he made his words more emphatic by letting his closed hand come in contact with a table in front of him.

The question, "Should the European powers aid the rebellious States of Turkey?" was decided in favor of the affirmative. The speakers were: Affirmative—King, Hoyt and Williamson; Negative—Travelute, LaTourrette and Hughes.

The following persons were elected members: O. Powell, O. J. Gist, J. M. Gist and C. January; and G. Platt, C. S. Buell, J. H. Hicks and F. C. Abbott, were recommended for membership.

The question for debate this evening is something about love. All will be welcome as visitors, especially the new students.

JED.

Township Books, Poor Records, Estray Records, Poll Books, Official Records, furnished by the Kansas Publishing House, Topeka.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf GEO. W. MARTIN Publisher.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the **INDUSTRIALIST** by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

Register, Great Bend. Daily and weekly. Only daily within 219 miles. A. J. Hossington, Editor and Proprietor. 22-1m

Press, Girard. Established 1869. Official paper of county and city. Republican in politics. Wasser & Riddle, Editors and Proprietors. 22-1m

News, Peru. F. G. Moore & Co., Publishers and Proprietors. \$1.50 per year. A news sheet published in the interests of Chautauqua county. 22-1m

Kansas Farmer, Topeka. The State Agricultural Journal. In its 14th year. Eight pages; weekly. Sample copies free. J. K. Hudson, Editor. 22-1m

Examiner, Hutchinson. An independent Democratic newspaper. Published every Friday. Official paper of city and county. \$2.00 per annum. Wm. J. Turpen, Proprietor. 22

American Young Folks, Topeka. An illustrated monthly paper for boys and girls. Fifty cents per year. Sample copy free. Address, American Young Folks, Topeka, Kas.

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Clother.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

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School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms have been fitted up in a comfortable and attractive style.

THE INDUSTRIALIST.

SATURDAY, SEPTEMBER 16, 1876.

Students Enrolled Since Aug. 24, 1876.

NAME.	COUNTY.
Abbott, Frank C.	Riley.
Adams, Emma L.	Riley.
Bailey, Willie S.	Osage.
Beck, Jno. W.	Riley.
Boley, Mary B.	Pennsylvania.
Bayles, John	Riley.
Benjamin, Daniel A.	Atchison.
Benjamin, Emery W.	Atchison.
Bissell, Edgar	Phillips.
Blain, Arthur T.	Riley.
Blanc, Jno. H.	Coffey.
Briggs, Harry	Riley.
Brous, Frank D.	Riley.
Brown, Ada E.	Riley.
Brown, Cortez	Washington.
Brown, Mark L.	Riley.
Browning, Emma E.	Riley.
Buel, Warren C.	Wabaunsee.
Buell, C. Stewart	Riley.
Burnham, Wm. P.	New Mexico.
Campbell, Emma	Riley.
Campbell, Etie A.	Riley.
Campbell, Fannie	Riley.
Campbell, May	Riley.
Campbell, Wm. A.	Riley.
Child, Ella	Riley.
Clark, Anna C.	Riley.
Cole, Fannie J.	Riley.
Copley, Albert	Jefferson.
Cotton, Fred L.	Wabaunsee.
Cotton, Katie H.	Wabaunsee.
Crowl, Jessie C.	Pottawatomie.
DeForest, Rodman A.	Nemaha.
Delahay, Charles	Leavenworth.
Dutcher, Matie	Riley.
Elliot, Willard S.	Riley.
Ellsworth, Miles	Atchison.
Ernst, Wm.	Lyon.
Esdon, Maggie	Riley.
Everhart, Logan	Labette.
Failyer, Geo. H.	Cherokee.
Failyer, Mariam	Cherokee.
Failyer, Miriam	Cherokee.
Fawley, Abram	Davis.
Fields, Wm. H.	Riley.
Fletcher, Ellen	Riley.
Fletcher, Hannah	Riley.
Fraunberg, Wm. S.	Labette.
Freiligh, Jno. H.	Cherokee.
Gist, Jno. M.	Brown.
Gist, Owen	Nemaha.
Glossup, Lydia	Riley.
Godfrey, Albert N.	Greenwood.
Gregg, Mollie B.	Riley.
Griffing, Jno. S.	Riley.
Griffing, Wm. J.	Riley.
Haines, David	Riley.
Haines, H. F.	Riley.
Harvey, Henry	Sedgwick.
Haun, Jno. E.	Harvey.
Hayes, M. Burt	New York.
Hibbard, Alice	Riley.
Hopkins, Sam'l D.	Davis.
Houston, Grant U.	Riley.
Houston, Hortense	Riley.
Houston, L. N.	Riley.
Howard, Giles P.	Riley.
Howard, Walter C.	Riley.
Hoyt, Emma	Brown.
Hoyt, Fred O.	Three Oaks, Mich.
Hicks, Jno. H.	Leavenworth.
Hughes, Frank	Cherokee.
Huling, Orlando D.	Davis.
Humphrey, Carrie E.	Riley.
Humphrey, Louis E.	Labette.
Hurlbut, Jannette	Bedford, Iowa.
January, Charles	
Jarbeaux, Belle D.	Riley.
Jones, Carrie L.	Wabaunsee.
Kay, Jennie A.	Pottawatomie.
Keller, Milton W.	Davis.
Keller, Virgil E.	Davis.
Kimble, Martha	Riley.
King, John	Marshall.
Knapp, Frank	Miami.
Knipe, Geo. D.	Riley.
Knipe, Lucy A.	Riley.
Knostman, Amelia	Riley.
Knostman, Emma	Riley.
Kroenke, Carl	Riley.
La Tourrette, Jas. F.	Colorado.
Leasure, Marion F.	Linn.
Lewis, Ira H.	Labette.
Lynch, Fred C.	Cherokee.
Lynch, James H.	Cherokee.
Mails, Chas.	Pottawatomie.
Mails, Jennie E.	Pottawatomie.
Mann, Jno.	Rice.
Marlatt, Willie B.	Riley.
McClanahan, S. L.	Crawford.
McConnell, Chas.	Riley.
McKelvy, Robert	Washington.
McQuary, J. Hollister	Saline.
Meacham, Mary A.	Riley.
Miles, Geo. W.	Texas.
Moore, Cassie J.	Shawnee.
Morgan, Sam'l M.	Lyon.
Neale, Cora A.	Riley.
Parker, Mary G.	Riley.
Parish, Emma	Riley.
Parkerson, Fannie R.	Riley.
Parkerson, Freeman	Riley.
Patee, Henry E.	Riley.
Peckham, W. H.	Riley.
Perry, Geo. H.	Riley.
Platt, Augustus H.	Riley.
Platt, Geo.	Riley.
Powell, Omar	Marshall.
Rathbun, Phebe	Riley.
Reed, Corvin J.	Pottawatomie.
Rhoades, Anna H.	Pottawatomie.
Robertson, Mary J.	Jewell.
Roper, Nida	Riley.
Rushmore, Harry C.	Jefferson.
Ruland, Frank C.	Butler.
Schroeder, Chas. E.	New York.
Shaw, James	Riley.
Shiner, Wm. Bee	Texas.
Shofe, Ella B.	Riley.
Snyder, Ella	Doniphan.
Snyder, Gussie	Doniphan.
Todd, Irving	Riley.
Travelute, Charles F.	Marshall.
Ulrich, Corinna	Riley.
Ulrich, Wm.	Riley.
Vincent, Ella E.	Riley.
Ward, Stanley M.	Ellenville, N. Y.
Waters, Eben	Labette.
Whiting, Fairy E.	Riley.
Weeks, Joseph	Phillips.
Whitney, Kittie	Riley.
Willey, Ida.	Cherokee.
Williamson, J. E.	Shawnee.
Williamson, Lizzie	Royal Center, Ind.
Williston, Carrie	Riley.
Williston, Frank H.	Dickinson.
Wilson, Amos E.	Washington.
Winder, Ivaloo	Riley.
Winne, Ella M.	Riley.
Winne, Jno.	Riley.
Wood, Arlie	Labette.
Woodman, Agnes M.	Riley.

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A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The Fall Term began Thursday, August 24th, 1876.

KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life. The Farmer's Course is the leading one of the Institution.

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To Mechanics, in addition to the studies of the Farmer's Course, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

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The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs in the Musical Department; and a charge of \$1.00 per month for material and instruments used by male students in Printing and Telegraph Departments. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR.—Fall Term began Thursday, Aug. 24th, 1876.

For further information, apply to

J. A. ANDERSON, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, THURSDAY, SEPTEMBER 21, 1876.

No. 23.

THE INDUSTRIALIST. Published every Saturday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application. Address A. A. STEWART, Manhattan, Kas.

Boiled Down.

State full of land buyers.
Iron ore found in Ford county.
Not a house for rent in Kirwin.
Iola began cutting corn last week.
A circus scooped \$2,000 out of Ottawa.
Heavy English immigration to Russell county.
The Kansas press isn't going it on politics—oh, no!
Coal struck in Crawford county at depth of 158 feet.
A Prussian colony wants 20,000 acres of Kansas land.
Lawrence Standard has tobacco leaves 13x36 inches.
Junction City is receiving large quantities of wheat.
Wilson county will have 1,500,000 bushels of corn this year.
Atchison has a 9x12 inch sweet potato weighing 3½ pounds.
One New Jersey farm sent twelve tons of currants to New York.

The Lantern reports two acres of Marshall county cotton in bloom.

Any Kansas paper not receiving the INDUSTRIALIST, will please notify it.

Why is a printer like a cripple? Because he can not get along without a "stick."

The Scandia Republic reports but little damage by the g'op'r in Republic county.

The new buildings at the Agricultural College are substantial, roomy, and economical.

The first invoice of apples received at the Centennial was from Welcome Wells, of Kansas.

Kansas business men are hopeful; eastern business men are hopeless—that's the difference.

Pedigrees for the next volume of the American Herd-Book, must be forwarded before Nov. 15.

Buyers had to stop purchasing wheat at Clay Center last Saturday, for want of cars and store-rooms.

The stock of oil now in the Pennsylvania oil regions is 3,164,000 barrels; yet the price has been lately doubled.

The Emperor of Brazil said of the Kansas exhibit: "This is a wonderful show, the most practical of anything I have seen."

The 20,000,000 prairie chickens and quails killed in Kansas last season, would, if alive, have eaten ten million bushels of hoppers.

Gen. Sherman said that Kansas might have three corn crops eaten up, and beat the world with the fourth in the same year. Sensible man.

The farmers of Lancaster county, Pennsylvania, are discussing the feasibility of dispensing with fences, on account of the expense of repairs.

The coffee crop of the world last year was 900,000,000 pounds, of which the United States used one-third. This doesn't include the bulk of the hotel beverage.

A physician affirms that half a drachm of bi-carbonate of soda, dissolved in an ounce of water, gives a solution which, if held in the mouth, cures toothache.

In view of the abuse of last winter isn't it about time that the getters-up of the Kansas exhibit, should have due credit for the position and immigration won for the State by their pluck and energy?

Burlington Patriot reports several yields of wheat at 24, 20½, 21½, 18 and 20¾ bushels per acre, of first rate quality. One farmer has 7,900 bushels of wheat and 2,100 of oats. How many merchants there had a better clear income?

A Paying Business for Women.

The poor needle-woman has found able advocates in the pens of many influential writers; benevolence pitied and relieved. The factory girls and artificial flower-makers have had their sympathizers; yet many others of the gentler sex, who derive their subsistence from the toil and labor of their own hands, have endured and still experience privations which are unknown, or only known to a few besides themselves. Why should there be such distress in this land of wealth? Why should there exist this cause for pity? Contrast the two great sections "male and female" of the population of our country numerically with each other; compare the innumerable and varied vocations which are assigned to one, with the few that are assigned to the other,—and the cause is plain. Open to women a wider and more diversified field of operations; accord to them a less dependent position than that which they now occupy,—and we may look for better results.

The employment of females as telegraph operators originated with the telegraph companies, on the ground of economy. The postal telegraph of England, combining this principle with other advantages, has considerably enlarged upon the idea. The success of the scheme with the postal telegraph authorities may be readily inferred from the fact that the number of female operators employed in the district and branch offices in London, exceed that of the males by fifty per cent. The number employed are as follows: Female operators, 309; male operators, 199; total, 508.

Mr. Scudamore, in his report to the Postmaster-General of England for 1873, says:

"I am of the opinion that at a future time when we have had some further experiences with a female staff, and when circumstances will enable that department to provide for the accommodation of a larger number of females, it will be well to entrust to them a larger part of the work of the telegraph account and telegraph message branches, and to effect a corresponding reduction of male operators."

The postal telegraph of Europe has now as many female operators as male, or nearly so. The experiment of employing female operators was at first considered hazardous; but the experiment has proved that the admixture of the sexes involves no risk, but on the contrary is highly beneficial. It raises the tone of the male operators by confining them during many hours of the day to a decency of conversation and demeanor

which is not always to be found where men alone are employed; and, further, it is a matter of experience that the male operators are more willing to help the female operators with their work than to help each other. On many occasions pressure of business is met and difficulty overcome through this willingness and cordial co-operation.

From an article published by the New York Tribune, on women's earnings, we find that the female telegraphers of that city have an average salary of \$12 per week, while that of milliners, dress-makers, sewing machine operators, etc., is from \$5 to \$10 a week. The number of female telegraphers in the United States is small, but is steadily increasing every year with satisfactory results.

Telegraphy most uses the perceptive faculty, which is naturally larger in women than in men. Females catch the sounds of the instrument and interpret them with surprising quickness; and the success of the experiment in employing them as operators certainly indicates that the telegraph service will become universally popular as a vocation for women.

Unfortunately, employment for women, as we have before observed, is limited to few branches, the engagement in most of which is degrading; hence, many a mind, many a hand which might win prosperity, is inactive, useless, and reliant upon the sterner sex to a greater extent than is fitting. Therefore, the discovery of a new source that is likely, in however small a ratio, to inspire emulation, to arouse dormant energies, and to call latent intellect into life and action, must be a matter of congratulation.—[W. C. Stewart.]

THE general stagnancy of business for the past two years, which has reduced property in New York and Philadelphia to one-half or one-third its former price, will drive both capital and immigrants to Kansas. Furthermore, as the pressure can only be relieved by putting in the market the wealth reaped from the ground by the farmer, the agricultural States will be the first to enjoy relief. There is money enough in the hands of banks and capitalists. What is needed is something to buy that money with. Kansas has for sale \$10,000,000 worth of wheat and \$30,000,000 worth of corn, to say nothing of other crops or stock. Forty millions of dollars going into the hands of our farmers this year, will make things lively in spite of any present or probable loss.

If any farmer who is down in the mouth will kindly present us his last wheat and corn crops, we will sell them, pocket the proceeds, and regard all sublunary matters with delightful composure for the next twelve months to come. The trouble with this, and a score of other "undersigneds," is that he has no crops to sell.

THE INDUSTRIALIST.

THURSDAY, SEPTEMBER 21, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

Recent Stock Purchases.

During the past season important additions have been made to the College live stock, which cannot but add greatly to the reputation of the College herds. We have all along labored under some disadvantages with our stock; chiefly, however, such difficulties as evidently attend the beginner with small means. The educational work of the College farm seemed to demand in the outset that all the prominent breeds should be represented in the College herds. In endeavoring to accomplish this, our limited means enabled us to purchase only a very few of each sort. The original plant consisted chiefly of pairs and trios of Shorthorn, Devon, Galloway and Jersey cattle, thus compelling us to keep a number of bulls out of all proportion to the cows. Then, too, our buildings have been very ill-contrived or insufficient, and the farm itself has been, until lately, generally without fields or proper subdivisions. We are glad to be able to say that at the present, most of these difficulties exist only in a mitigated form. Our herd by judicious pruning has been brought into better proportions; the buildings are passable and convenient, though still cramped and insufficient and a large portion of the farm is now divided into fields.

The fact that Zenas King 15801, the head of our Shorthorn herd, was closely related to all the young things of the herd, made it necessary to dispose of him, which was done last spring at a fair price. In securing his successor we aimed to obtain an animal such as would improve our herd individually, as well as in the matter of pedigree. Such an one we think we have found in the 2d Duke of Jubilee 19498, purchased during the past summer of Albert Crane, Durham Park, Marion county, Kansas. His pedigree is as follows:

2D DUKE OF JUBILEE.—(1759 Shorthorn Record.) Red; calved March 19th, 1873. Bred by J. M. Woodruff, Nineveh, Johnson Co., Indiana.

Got by Duke of Montrose, 9907.

1 dam, 1st Jubilee of Montrose, by Lord Derby 4949
2 dam, Jubilee 6th.....by Clifton Duke, (23580)
3 dam, Jubilee 4th, by Imp. Duke of Airdrie (12730)
4 dam, Imp. Jubilee.....by Lycurgus, (7180)
5 dam, Jacintha.....by Fawnley, (6004)
6 dam, Junta.....by Warden, (5595)
7 dam, Joyance.....by Javelin, (4093)
8 dam, Joy.....by Blyth, (797)
9 dam, Janette.....by Wellington, (684)
10 dam, Angelina.....by Phenomenon, (491)
11 dam Anne Boleyne.....by Favorite, (252)
12 dam, Princess.....by Favorite, (252)
13 dam, Bright Eyes.....by Favorite, (252)
14 dam, Bright Eyes.....by Hubback, (319)
15 dam, Bright Eyes.....by Snowdon's Bull, (612)
16 dam, Beauty.....by Waistell's Bull, (669)
17 dam, Duchess of Athol, by Masterman's Bull (422)
18 dam, Tripes.....by Studley Bull, (626)
19 dam, Bred by Mr. Stephenson, Ketton, Eng., 1739.

The Duke of Montrose 9907 was got by Muscatoon 7057, a famous prize winner and known in Kentucky as "the great

Muscatoon;" his dam being Grace, by Airdrie 2478, a Rose of Sharon cow of Abe Renick's own breeding. Muscatoon was by Royal Oxford (18774), a pure Oxford, out of Mazurka 2d of the famous tribe of that name. The next cross is that of Lord Derby 4949, a noted bull bred by R. A. Alexander, got by Albion 2482, out of the cow Lady Bell 3d by El Hakim 2814. El Hakim's one-half of Booth blood of the noted Fame by Raspberry (4875) alone prevents Lady Bell 3d from being "pure Bates." Of Clifton Duke (23580) and imported Duke of Airdrie (12730), little need be said here. Clifton Duke was a "pure Bates" bull and noted sire much used by Geo. M. Bedford. Imported Duke of Airdrie, known everywhere as the "old Duke," was a pure Duke, and is said to have been the best sire ever imported.

From this pedigree and brief analysis, it will be seen that not only is there nothing objectionable in the pedigree of the 2d Duke of Jubilee; but that in the direct line and lateral branches, it reaches into the oldest and best blood known to Shorthorn history.

Individually, the 2d Duke is excellent, and would be considered a show animal anywhere. He is almost a complete red of the deepest tint. His head is of the Bates cast, very clean and well set on; shoulders massive, and crops even to fullness; capital loin and hips, with flanks well let down; more than this he is an almost perfect handler. In short, the 2d Duke of Jubilee is a very even, stylish bull, with a pedigree that shows that he gets these qualities, not by chance, but through a long course of systematic breeding, from which we may safely argue that he will transmit these qualities with certainty to his offspring.—[Prof. Shelton.]

What Prof. Riley Said and Did Not Say.

We clip the closing paragraphs of a letter from Prof. Riley to the New York Tribune, dated August 28, 1876, upon the locust question. We have not room in the present number for other extracts, which will appear next week:

In closing let me say a few words as to my own position, since it is being very much misconstrued. The fact that my predictions for the past two years have been fully justified by subsequent events, has led many people to attach too much importance, perhaps, to my opinions; and now that the last hope expressed, and opinion given—viz., that the locusts might not, and probably would not, overrun the Western States again this fall—have proved unfounded, there is a tendency on the part of some editors to unjustly censure. The following paragraph has passed from paper to paper, and formed the basis of unwarranted criticism:

Prof. Riley, State Entomologist of Missouri, who has spent considerable time in studying the habits of the grasshoppers, says that not only will there be no locusts in Missouri, Kansas and Nebraska this year, but that the ordinary batch of the indigenous grasshopper, and other destructive

insects, will be less than usual, the only exception to this being the borers.

The paragraph originated, I think, with the Salina (Kan.) Journal, and the editor had evidently no intention of misconstruing. Yet any one who will carefully read what I really wrote in the Tribune of last January, and in my 8th Report, in discussing the prospects of the year, will see that there is much misrepresentation. As an offset to many sensational rumors and forebodings made last winter, here is what I really wrote, some passages being italicized (quoted) to indicate wherein the above purported opinion is unjust:

I give it as my belief that, first, in the three States mentioned, (Missouri, Kansas and Nebraska) there will not hatch as many locusts next spring as would naturally hatch in ordinary seasons from the indigenous species; second, that, compared with other parts of the country, those States ravaged by locusts last spring and early summer will enjoy the greater immunity, during the same seasons of 1876, not only from local injuries, but from the injuries of most other noxious insects, except the wood-borers. In short, the people of the ravaged section have reason to be hopeful rather than gloomy. "They will certainly not suffer in any general way from locust injuries in the early season; and the only way in which they can suffer from the migrating pest is by fresh swarms later in the year from the far northwest," the odds being, however, from a number of reasons which it is unnecessary to enumerate here, very great against any such contingency.

I thus distinctly gave my opinion that Missouri, Kansas and Nebraska (having considered Colorado and Minnesota separately) would not suffer in the early season or in spring and summer; admitting, however, the possibility of fresh invasions in the fall, though considering such improbable. Every one knows how fully the first opinion has been justified by the events, and that the second has not, shows how imperfect our knowledge yet is of the native breeding places of the pest. The season in the northwest has been dry and favorable to locust development, and I freely confess that an invasion such as we have had during the month, only two years after the general invasion of 1874, was not expected by me, and is indeed without precedent. I am naturally inclined to take an optimistic view of the subject, for the reason that such a proneness to exaggeration prevails; but I desire not to be placed in a false light, and hope that the Colorado Farmer and other journals that have taken purported but inaccurate reports of what I did predict, for text on which to build complaint, will make due amende.

MARSH MURDOCK, of the Wichita Eagle, is Mark Twain's Caloptenus squirtus.

EDITORS and contributors will please furnish copy not later than Monday. The inside form will be made up Wednesday morning, as our publication day has been changed to Thursday, to afford the advanced printing class more drill in proof-reading, "making up," press-work, and mailing.

To put an item in the "P. P. S." column of the Junction Union is to start it all over the State. We find in it the following:

Students at Manhattan will hereafter be charged one dollar per month for the use of material in the printing and telegraph offices.—[Junction Union.]

Please put it, "Male students will be charged," &c. As these "Industrials" are for females, no charge for either material or tuition is made from them.

THE INDUSTRIALIST.

THURSDAY, SEPTEMBER 21, 1876.

TIME-TABLE OF THE K. P. RAILWAY. PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Ask W. C. Stewart, "How do you like it?"

Number of students enrolled this term, 159.

As we go to press the g'opp'rs have nearly vamped, and the wheat is coming up nicely.

Persons having rooms which they wish to rent to students, will please address W. C. Stewart, Sup't of Telegraph Dep't.

The current term of the Agricultural College began Thursday, August 24th, and will close Thursday, December 21st, 1876.

James A. Scarbrough, traveling correspondent of the Topeka Commonwealth, took in the various departments of the College last Monday.

NINETY-FIVE CENTS is now offered for School District Bonds, when made out on Agricultural College blanks Address, E. Gale, Loan Commissioner, Manhattan

The Caloptenus squirtus has been chawing around of late, but has done very little damage. A strong north wind is blowing, and as that is the favorite inspiration of these sagacious but "onprincipled" idiots, we devoutly hope that they will break their miserable necks on the equatorial line.

Since our last report the following students have been assigned: David A. Beamer, Greneda, Nemaha county; George K. Davidson, Ettie F. Higinbotham; Carrie M. King, of Manhattan, Riley county; Adelbert D. Wood, Americus, Lyon county; Charles E. Little, Emporia, Lyon county; and Hattie Little, Emporia, Lyon county.

Somebody's horses and everybody's cows are everlastingly scudding through our lane, hunting for an open gate; and as the students and workmen must use the only opening into the College grounds, it is impossible to keep it always closed. There is one old mare who gets up the night before, waddles out and squats down on her hind legs in front of that gate, waiting for it to be left open. We would like to own that animal and a loaded shot-gun—for two minutes!

Probably there is no law requiring owners to keep their four-legged property out of an open lane through a private farm owned by the State of Kansas. But we also imagine there is no statute which forbids a farmer from digging holes in his lane. And some of these bright days, when we have more money than we know what do with, that lane will just be riddled with grass-hidden post-holes, honey-combed with concealed but bottomless bear-pits, yawning with toppling precipices, bristling with hair-triggered Columbiads warranted to shoot in the eye; and sown a foot deep with dynamite. And then when that old mare comes up and sits down hard in front of that gate and finds her forefoot blown smack through her ears, and the rest of herself tumbling down to China, she will wish she had staid away.

Seriously, this pirating horse and cow business is a great annoyance, and if owners can help us any we would fully appreciate the favor.

The Electric Bells.

This week the hours have been rung by electric bells in the different buildings, the College bell being only used for the morning assembly. Last term W. C. Stewart, Sup't Telegraph Department, made an ingenious attachment to an ordinary clock, by which an electric alarm bell was rung

every fifty minutes—the length of our recitations. It worked so well, and is so likely to stand wear, that additional bells were ordered. There are two in the Barn, three in the Mechanical Building, one in the Laboratory, and one for the Horticultural Building. These are connected by wire, and the circuit is closed by the Stewart clock attachment. Every forty-six minutes a warning signal is sounded, giving Professors notice that but four minutes remain; at fifty minutes the hour signal rings, when the classes are instantly dismissed; and six minutes thereafter a third signal announces the beginning of the next recitation. Every student has ample time to be in his place before the recitation signal, and if not then on hand is zeroed without further ceremony, unless he satisfactorily accounts to his teacher for tardiness.

Heretofore, the College bell was often inaudible in the shops, and the present system is a vast improvement upon the old one, as time is given for announcing lessons or putting away tools, and the instant for beginning recitations is automatically signaled in each building. The several squads and companies of this regiment now move not only like clock-work, but by clock-work—with lightning behind it; and everybody is relieved from the fearful responsibility of following either his own or any other watch. Presidential, professional and student watches have alike waned in power and glory; they are on a dead-level of weakness; and no watch, clock or squint-at-the-sun has authority in this military district except the telegraph clock, which takes "time" every morning by lightning from the Kansas Pacific regulator.

Whether Stewart has applied for a patent or not we don't know; but hereby give him a better patent of just credit for an economical method of moving our classes. And we look forward with the utmost relief to the sleet-storms of the coming winter, when that bell on the Barn will, with steel-hearted obstinacy, freeze itself so fast that a horse couldn't ring it. And, incidentally, hand in hand with this delightful anticipation, walks the further expectation that this local will choke, for at least a week, the brazen throat of that gloating individual who is forever howling for "copy." There! He is dead, and we are happy. Ah—ha!

To the Patrons of Riley County.

I am authorized to announce that the next meeting of the State Grange, in December next, will be held in Manhattan. I desire to call attention to the necessity of trying to make everything as pleasant as possible. We should each and every one prepare, during the fall as opportunity offers, bouquets of grasses, grains and flowers, ready to decorate the hall in the form of bowers, wreaths, crosses, etc. Let us each and all see what ingenuity can suggest toward making the next session of the State Grange a success, not only for business but for pleasure. We should prepare and practice plenty of music, both vocal and instrumental. Let there be no lack on our part to amply prepare and attend the meeting.

Fraternally Yours, O. W. BILL.

The following items are clipped from the Nationalist:

Mr. B. F. Griffin has found that in warm weather his cattle almost invariably feed against the wind, and in cool weather with the wind. By noticing the wind, therefore, he generally knows in what direction to hunt for them, but before discovering this habit much time was lost in hunting in the wrong course.

On a recent visit to the College we were much interested in the Telegraph Department by the Superintendent, W. C. Stewart, illustrating to us a plan which he has contrived, by which he will be enabled to ring a bell every fifty minutes in each building. The bells are to be connected with the electric battery, and also with a clock, which is provided with an attachment to open and break the connection at the proper time. We also noticed the very neat appearance of the sewing room. The walls are hung with pictures, and the floor is handsomely carpeted.

Students' Column.

J. M. Donnel, of Riley Center, asks the attention of school teachers to the following sentence: "The dog swam almost across the river." How is the sentence parsed? The hard point is "almost." Let the grammarians now come to the front.—[Nationalist.]

The dog swam, not across the river, but almost across it. Therefore, "almost" is an adverb modifying the adverbial phrase "across the river."

The meeting of the Alpha Betas last Friday afternoon was the best one of the term. Many members were present, and all participated in the exercises with a commendable degree of zeal and earnestness. After prayer and roll call, the new officers were installed, and the President, Mr. Ulrich, upon taking the chair, made some appropriate remarks, and offered some good advice. Miss Ida Willey and Mr. Ward were received as members in "good and regular standing." The debate on the question, "Should church property be taxed?" was conducted in a spirited manner, and decided in the negative. Several persons were recommended for membership. The Society will hereafter meet at 1:30 in the afternoon instead of 2:00 as heretofore. The Gleaner will be read to-morrow, and a good attendance is anticipated. Everybody come out.

The Websters received so many visitors at their last meeting that the Marshal was necessitated to ask Mr. A. A. Stewart, the cheerful accommodator, for more chairs.

We were glad to see Mr. Leisure, who has been ill for some time, in his place again. His sarcasm, witty aphorisms, and impressive manner of delivery, add much toward making the exercises interesting.

Messrs. Buell, Hicks and Abbott, were elected members; and R. A. DeForest was recommended for membership.

One of the business actions of the Society was directing the Corresponding Secretary to purchase another book on "Rules of Order." We suppose they intend to be posted on parliamentary laws.

The question for next evening is, "Are sectarian educational institutions more beneficial than public ones?"

We solicit your presence and attention as cheerfully as does an anxious young lady her admired suitor's.

JED.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets. 16

Clothier.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing, Painting. The Department is well equipped with tools and machines for the student's use.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

School District Bonds.—Several thousand dollars in School District Bonds wanted, for which **95 cents will be paid**, when made out on Agricultural College blanks. Those direct from District Boards will always have the preference. In all cases, copies of all papers relating to the issue of the bonds must be forwarded, duly certified to by the district clerk. Blank bonds filled out ready for signature when desired. Address, E. Gale, Loan Commissioner, Manhattan, Kan. 10-tf

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As an expression of our appreciation of the kindness shown to the **INDUSTRIALIST** by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any exchange furnishing the copy therefor.

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Enterprise, MANHATTAN. \$1.00 per year. Patee & Runyan, Publishers. 9-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

News, Stockton. Weekly; four pages; size, 20x26; circulation, 300. Newell & Barnes, Editors. 11-1m

Recorder and Express, Holton. Published weekly. Beck & Stuner, Editors and Proprietors. 11-1m

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Register, Great Bend. Daily and weekly. Only daily within 219 miles. A. J. Hossington, Editor and Proprietor. 22-1m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibbetts & Co. 16-1m

Press, Girard. Established 1869. Official paper of county and city. Republican in politics. Wasser & Riddle, Editors and Proprietors. 22-1m

News, Peru. F. G. Moore & Co., Publishers and Proprietors. \$1.50 per year. A newsy sheet published in the interests of Chautauqua county. 22-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Kansas Farmer, Topeka. The State Agricultural Journal. In its 14th year. Eight pages; weekly. Sample copies free. J. K. Hudson, Editor. 22-1m

Chief, Kirwin. The oldest paper under one management in northwestern Kansas. Republican; home print; \$1.50 a year. A. G. McBride, Editor. 10-1m

Reporter, Louisville. The largest, oldest and best paper published in Pottawatomie county. \$1.50 per year. Hick & Barnes, Editors and Proprietors. 10-1m

Progress, Olathe. The largest circulation of any paper in the county. Independent in politics. Advertising terms reasonable. Jas. Wilson, Publisher. 10-1m

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Examiner, Hutchinson. An independent Democratic newspaper. Published every Friday. Official paper of city and county. \$2.00 per annum. Wm. J. Turpen, Proprietor. 22

Monitor, Jewell Centre, \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14

American Young Folks, Topeka. An illustrated monthly paper for boys and girls. Fifty cents per year. Sample copy free. Address, American Young Folks, Topeka, Kas.

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Times, North Topeka. A local journal for the promotion of the best interests of the place and of northern Shawnee county. Eight pages; \$1 a year. Frank A Root, Editor and Proprietor. 10-1m

Dispatch, Hiawatha. In its seventh year. Official paper; organ of the staunch old Republican party. Thoroughly established; home print. \$2 a year. A. N. Ruley, Publisher and Proprietor. 8-1m

Gazette, Enterprise. A 40-column quarto. Independent Republican. Devoted to the financial interests of the publisher and the general good of the people. V. P. Wilson, Editor and Proprietor. 10-1m

Citizen, Fredonia. Established 1870. Circulation 828 and steadily increasing. Devoted to local interests and the legitimate profits of publisher. Independent Republican. J. S. Gilmore, Editor and Publisher. 9-1m

Nationalist, MANHATTAN. A Republican Reform weekly. Contains reports of Blue-mont Club, Farmers' Institutes, and everything of special interest to farmers. Terms, \$2.00 per year. A. Griffin, Editor and Proprietor. 11-1m

Journal, La Cygne. Saturdays. Republican 32 columns. Official city and county paper. A first-class country paper. \$1.50 a year in advance. No better advertising medium in eastern Kansas. Kenea & Lane, Publishers. 10-1m

Kansan, Valley Falls. The only Real Estate paper published in Jefferson county. Edited and published by the Real Estate, Loan and Land Department of Valley Bank and Savings Institution. S. A. Morrison, Manager. 11-1m

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KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

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Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life. The Farmer's Course is the leading one of the Institution.

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The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

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Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

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No contingent fees, except for use of pianos and organs in the Musical Department; and a charge of \$1.00 per month for material and instruments used by male students in Printing and Telegraph Departments. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term began Thursday, Aug. 24th, 1876.

For further information, apply to
J. A. ANDERSON, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, THURSDAY, SEPTEMBER 28, 1876.

No. 24.

THE INDUSTRIALIST. Published every Thursday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription. Advertising rates made known on application. Address A. A. STEWART, Manhattan, Kas.

Boiled Down.

Kansas has over 200 newspapers. Grass 12 feet high in Cowley county. Population of San Francisco, 272,000. Maple worm has not reached Wichita. The haunted house is now in Winfield. Broom-corn at \$80 per ton ought to pay. A circus scooped \$3,000 out of Atchison. Apples fifty cents a bushel in Coffey county. Broom-corn the leading crop in Rice county. Corn 16 feet altitudinously in Douglas county. Lawrence eats grapes at seven cents per pound. Taxable property of Norris county, \$1,623,149.40. Mitchell has a surplus of 2,500,000 bushels of corn.

Marshall county will be a forest twenty years hence.

A Washington county acre yields 3,600 pounds of grapes.

Jefferson county sports an ear of corn 9x10½ inches.

St. Mary's Times reports wheat 25 to 30 bushels average.

Sumner county field yields 25 bushels wheat per acre.

Not cars enough in Kansas to move the grain eastward.

One Illinois man has bought \$14,000 worth of land. Next!

The New York drought is the heaviest known for fifteen years.

An em-bossing machine—the foreman of a composing-room.

Arkansas city rejoices in steamboat connection with Little Rock.

Isn't it about time for some child of nature to predict a cold winter?

A German colony, with \$75,000 clear cash, is settling in Butler county.

Claimed that smoking a wound with burning wool prevents lock-jaw.

Barton county has a salt factory. Junction City is going to have one.

A Hutchinson prairie chicken, after a hearty dinner, took tea on 100 g's.

The kind of ties which merchants make the most profit on—adver-ties.

The hay-stacks in Kansas this year are like the pines in the forest for multitude.

And soon the devouring prairie fires, which no one starts, will make the grand rounds.

Claimed that an iron bar placed in bins holding barley, rice, bran, etc., protects from insects.

A LaCygne farmer has sown winter wheat fifteen consecutive years with but two failures.

When a Wisconsin man dies without heirs, his property goes to the school fund of the State.

Two hundred and fifty women will graduate as telegraph operators, this year, at Cooper Institute.

In Spain the thermometer was 166° in the sun this summer, and the political campaign hadn't begun, either.

And now comes the Wichita Eagle with a sweet potato 4 feet 7 inches long. Roll it over the locusta migratoria.

In southwestern Minnesota the squirtus has destroyed four successive crops. Better sell out and come to Kansas.

McPherson farmers suggest that no grass be burned until next spring, when the g-hopper can be driven into it and roasted.

Prof. C. V. Riley on the Locust Prospect.

[Extract from letter to N. Y. Tribune, Aug. 28th.]

It is a thankless duty one is called upon to perform, this giving of opinions as to the happenings of the future; and while I have ever been ready to give my own, it should not be forgotten that in doing so I but express an opinion which can only have weight in proportion as it is based on knowledge. Now, our knowledge of the locust problem is by no means complete, and it would be folly for any individual to pretend to know positively what will happen. In order to properly form an opinion, I will first review the locust doings during the month in the light of a large number of communications and dispatches that have come to me during the past three weeks. For convenience' sake let us consider the subject by States.

From this brief summary, and from other facts at hand, it would appear that the locusts that hatched and did more or less damage in Minnesota early in the year, endeavored to get away to the north-west as soon as they got wings. They were subsequently repulsed and borne back again by the winds to their hatching places; thence south and south-west into Iowa and Nebraska. As they rise and fly from day to day they concentrate and condense, since in passing over a given area during the hotter parts of the day new accessions are constantly being made to the flying hosts which, with serried ranks, descend in the afternoon. Thus, in returning, the swarms were thicker and more destructive in places, than they were in leaving. Yet it is plainly to be seen from the reports, that the column which thus came back to Minnesota and passed to the south and south-west, was more straggling than in 1874, and that by the middle of the month it had spent its force and left eggs throughout most of the country traversed. Had we to do with this column only I should feel quite confident in stating that the locust would this year do no more damage than they have done, and would not extend into Kansas or Missouri. But it is equally clear that fresh swarms that hatched in Dakota, and further north-west, followed on the heels of the Minnesota swarms, passing over much of the same country to the east and southward into Colorado—destruction more or less intense following in their wake. From these swarms I have serious fears, and they may possibly invade Kansas and western Missouri. Much will depend on wind and weather, and let us hope for the best. Yet I feel tolerably sure that they will not be as widespread or do as much injury as they did in 1874, for the simple reason that they are laying earlier and have apparently nearly spent their force. The proof that they came from the north-west is found not alone in the records of their movements but in the period of their laying. Those hatched in southern Minnesota lay about the middle of July, and in proportion as the period of oviposition is later, in that proportion have the insects been reared further north. One thing is certain; if the

people of Kansas and Missouri are to be overrun again, they are in far better condition to withstand the pests than they were in 1874. They have been blessed with good crops, and much of the corn can be saved. With the lessons of 1875 still fresh in mind, they will be better able to prevent and cope with possible injury from the young insects in 1877.

In answer to the question of Mr. H. as to whether the eggs will hatch this fall, I will say that the large bulk of those laid in Minnesota doubtless will, and in proportion as they hatch this fall, in that proportion will there be less injury next spring. Eggs which I have received show advanced embryonic development, and some have already hatched. Moreover, it is very evident from my advices that the eggs there are being to a large extent destroyed by enemies, and the signs generally are encouraging. The eggs laid later in the season, and in the country to the south, will probably not hatch in bulk till next spring.

The continued ravages of this locust pest will, it is hoped, bring our legislators to a realizing sense of their obligations to the western farmer. Feeling the importance of the subject, I made every effort last winter, with the assistance of others, to get Congress to enact a law which would cause a thorough investigation of this locust matter, and of some other entomological matters of national importance. The effort was warmly seconded by the people of the western country, which most suffers; but many good eastern people, in their narrowness, could see in the effort only another attempt to get somebody an office, while the Department of Agriculture, or rather its head, instead of encouraging, as it should, all efforts of the kind, looked upon the movement as an interference with its own work, and used its influence to impede and prevent action.

I am glad to see that Gov. Pillsbury, of Minnesota, has considered the matter of sufficient importance to suggest a conference of western Governors. He informs me that this conference will probably take place about the middle of October, and let us hope that since there seems little chance of assistance from the National Government, the Western States will do what in human power lies to overcome this evil. It also gives me pleasure to note that immediately upon the arrival of the insects into Iowa, Prof. C. E. Bessey, of the Agricultural College, issued a bulletin composed of the more practical passages from my last report. I hope, with him, that by being scattered over the State it may do some good.

A GREAT many of our best farmers declare their intention of sowing wheat just the same as though no grasshopper eggs had been deposited. That is right. Unless you sow you cannot reap. In 1868 many more eggs were deposited and hatched in the following spring, and yet there was no destruction of crops, and 1869 was a remarkably profitable year.—[Nationalist.

THE INDUSTRIALIST.

THURSDAY, SEPTEMBER 28, 1876.

JNO. A. ANDERSON,
Managing Editor.

J. H. FOLKS,
Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

We have greatly enjoyed publishing the advertisements of exchanges in our "Kansas Press" column. The insertion has done them no harm, and even if it has done good in no other way, it certainly has by giving us the gratification consequent upon an effort to return kindness. Our proposition was to insert the advertisement one month, and we have published each one three months. Hereafter, we shall drop on the thirteenth insertion anyhow; but like the column too well to drop it, and will be glad to publish gratis, for certainly one month, a similar "ad" of any and every regular paper in Kansas, whether exchanging with the INDUSTRIALIST or not. All advertisements received have been inserted; if any have missed, send again.

Hardy Ornamental Shrubs.

At the meeting of the Manhattan Horticultural Society, in the College, Sept. 14th, Mr. T. C. Wells presented the subject of "Hardy Ornamental Shrubs." An extended list of those shrubs which have proved hardy here was given, and the peculiar features of each dwelt upon at some length. Special attention was called to our native shrubs and vines. These have the advantage of being both hardy in our changeable climate, and, at the same time, many of them are really beautiful. It is a well-known fact that our prairies and forests furnish a list of shrubs and plants which, if carefully collected, would add materially to home adornment.

Mr. Wells has given more attention to this subject, probably, than any other member of the Society. And at our next meeting it is to be hoped that the strong points of our native plants may be brought out, and the list perfected by the experience of others, so as to furnish a guide to the members of the Society in the selection of shrubs and vines for home planting. In view of all the uncertainty which has hitherto attended this kind of culture, it will be a matter of special interest to be able to select at once those plants which are both attractive and hardy. We urge, then, that every member of the Society come forward next month with items of personal experience in this direction. Each one can contribute something towards making up a valuable list.

Dr. Stillman exhibited some very fine seedling apples. First, a large, sweet apple, keeping until March; tree very productive; may prove a valuable acquisition. Second, a large, quite tart apple; may be very good for the kitchen.

It will be seen that a first-class sweet

winter apple for our climate is much needed. It is well to be on the look-out for that apple. The examination of seedlings hitherto produced here, both apples and pears, have forced us to think that the "coming" fruits of this region will be from Kansas seedlings.—[Prof. Gale.]

Recent Stock Purchases. No. II.

Two years ago the College stock of swine consisted of Berkshires, Essex, Poland-China, Lancashires and Chester Whites, generally in pairs or trios. Of these, the Berkshires were owned by outside parties, the College keeping them "on shares;" and the Essex, both boar and sow, had long since been condemned as hopelessly unfruitful. After considerable experience with these numerous breeds it was found utterly impossible, except at a great outlay, to keep upon the same farm so many varieties. The demand for many of these breeds was limited, and even this demand we could only partly supply, it being impossible to furnish "different strains" of the same breed. Moreover, with so many breeds, there was a danger from crossing which no breeder who cared for his reputation would dare to incur. For these reasons it was decided to reduce the number of breeds to two—Berkshires and Essex.

Our Berkshires at the present consist of four breeding sows and two boars. At the head of our herd stands British Sovereign 2d, a young animal of great promise, having a pedigree as follows:

BRITISH SOVEREIGN 2D.—Bred by N. H. Gentry, Sedalia, Mo. Farrowed April 3d, 1876.

Got by Imported British Sovereign.

1 dam, Imported Royal Duchess.....by Othello.
2 dam, Sallie IV.....by Dewe's Boar.
3 dam, Sallie III.....by 2d Duke of Gloucester.
4 dam, Sallie II.....by King Tom's Boar.
5 dam, Sallie I.....by 1st Duke of Gloucester.

This pedigree is as fashionable and includes, perhaps, more prize winners than any other Berkshire pedigree, as a brief analysis will show.

Imported British Sovereign was bred by Capt. Stewart, Gloucestershire, England, and was sired by the famous Robin Hood, dam Cassandra. In 1875, British Sovereign won the first prize at the Provincial fair at Ottawa, Canada; triple prize for best imported boar; first prize at the Western fair, held at London, beating imported Lord Liverpool. The present owners of British Sovereign have refused \$500 for him. The famous young sow Sovereign Lady, who sold for \$500, is own sister of the same litter with British Sovereign.

Royal Duchess, the dam of British Sovereign 2d, was bred by Russell Swanwick, Royal Agricultural College, Cirencester, England, was only shown once in England—at the Gloucestershire show at Tewksbury, 1874—where she won first prize in the class under one year old. In Canada, Royal Duchess was shown at the Ontario Provincial Fair, 1874, at thirteen months, in the class of aged sows,

and carried off the first prize, beating Cassandra, the dam of British Sovereign and winner of the first prize at the Royal show held in Bedford, Eng., the same year. Royal Duchess at her last farrowing produced nine pigs, seven of which sold for \$510.

Individually, British Sovereign is worthy of his high ancestry. He is, we believe, as nearly a perfect pig as we have ever seen, and it is not too much to say that he will do wonders in elevating the standard of Berkshire swine in Kansas.

Other valuable additions have been made to the College stock of Berkshires within the past year. Among these must be mentioned the very well bred young sow, Lady Lenora, whose pedigree runs thus:

LADY LENORA.—Bred by John Snell's Sons, Edmonton, Canada. Farrowed April 17th, 1875.

Got by Imported Lord Liverpool.

1 dam, Imported Lady Leonidas.....by St. Aldwin.
2 dam, Lady St. Dennis.....by Gloster Premium.
3 dam, Lady Berkshire.....by Leonidas.
4 dam, Sweetmeat.....By The Squire.

Lady Lenora when ten months old weighed three hundred pounds in ordinary store condition. She is nearly perfect in all her points, but especially good about the head, and combines size and quality in an unusual degree. Lord Liverpool, individually and as a stock-getter, probably never had a superior; he was sired by Othello, the sire of Sambo 2d, Sambo 10th, Royal Duchess, Sallie 10th, Sallie 20th, and many other famous animals. In England, in 1874, Lord Liverpool won first prize at Bath and West of England show, first at the Royal Counties show held at Reading, and first at the Gloucestershire show held at Tewksbury. During the past winter he sold for \$700. Imported Lady Leonidas was bred by Russell Swanwick, Esq., Royal Agricultural College, Cirencester, England, and weighs seven hundred pounds in breeding condition.

With Lady Lenora was purchased Pride of Gloucester, whose pedigree runs thus:

PRIDE OF GLOSTER.—Bred by John Snell's Sons Edmonton, Canada. Farrowed April 21st, 1875.

Got by Imported Lord Liverpool.

1 dam, Pride of St. Bridge.....by Royal Pennant.
2 dam, Cardiff.....by Blacksmith.
3 dam, Kanellia 2d.....by Royal Gloucester.
4 dam, Rose of Gloucester.....by Garnester.

Pride of Gloucester is a very straight, even sow, though perhaps not quite the equal of Lady Lenora in fineness. Her pedigree, however, is very good, nearly every animal in it having been in its day a prize winner. Thus, Pride of St. Bridge, bred by Capt. Stewart, St. Bridge Farm, Gloucestershire, England, took prizes at nearly all the leading shows in England in 1874. She is a sow of great substance, and at twenty months weighed six hundred pounds. Cardiff was one of the first prize pen of three at the Royal show in Cardiff in 1872.

It will be seen from this, that the College farm now owns Berkshires of the very best blood of the two great breeders, Russell Swanwick, Esq., Royal Agricultural College, Cirencester, England, and Capt. Arthur Stewart, St. Bridge Farm, Gloucestershire, England. In addition to the above, we have two other very nicely bred sows, one of them due to farrow in a few days to Lord Liverpool.

Our Essex pigs are a very choice lot, being descended on one side directly from the well-known stock of Jos. Harris, Rochester, N. Y., and on the other from stock bred by the Michigan State Agricultural College. Space forbids our mentioning them in detail in this article.—[Prof. Shelton.]

THE INDUSTRIALIST.

THURSDAY, SEPTEMBER 28, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Number of students enrolled this term, 161.

Since the last report Mary M. Romick and Edwin H. Ulrich, of Riley county, have been enrolled.

The Dickinson County Fair will be held at Enterprise, October 12-14, instead of Sept. 12-14, as published.

Col. Phillips, Col. St. John and Judge Bliss, gave us the pleasure of showing them through College, the other day.

Mrs. Werden hands us the following for publication:

The question has been repeatedly asked, "What do you charge for music in the Agricultural College?" In reply we would say that, although the usual price is from \$15 to \$21 per a term of three months, for lessons upon the instrument only, we are giving a graded course upon the Piano, Organ, or Guitar, with a complete course of Harmony and Thorough Base — without which a musical student cannot attain success — for \$1 per week. Good Pianos and a fine Pedal Base Organ are furnished for practice.

As the school year is divided into two terms, those who desire to pay cash in advance for lessons can have them for \$15 per term of seventeen weeks; winter term, of twenty weeks, \$18. Voice culture, private lessons, fifty cents; in classes of four, \$1 per hour.

A good way to get articles from contributors is to announce publication; because, if the article does not appear on date, the contributor properly feels that the public will suppose the fault to be on his part. The public is entirely right; editors never make mistakes, even in announcements; and direlict correspondents ought to be abused. We stated three weeks since that the Regents of this Institution had been duly constituted corresponding editors of the INDUSTRIALIST. As the idea only popped into our head while the form was being made up, and lacked three lines to fill it, the Regents may not have been luminously aware of the honor awaiting them. But that little circumstance isn't worth considering. And we accordingly now give notice that Regent Kingsbury's article on — we havn't the exact title by us at this writing — will appear in No. 26; and that the one from Regent Lawrence will be found in No. 27. We take these gentlemen first, because of a notion that they may be more immediately amenable to the persuasive force of able-bodied impudence than the others, who, however, may just as well be mending their pens, and so save us the bother of abusing them.

We are told that "For man, love is a story; for woman, it is a history." This is pretty, but facts are stubborn things, and it doesn't do to omit all mention of his ten hours-a-day dig for family bread and butter, and her trouble over her baby's colic.—[Wellington Press.]

From the above, we should gently infer that Folks had spent the previous night in waltzing around the room with the baby in his arms, vainly endeavoring to quiet that illustrious Howadji by roaring forth his great comic song, "House bill No. —, An act, entitled an act amending an act, etc." Better stick to "Hush a by-e baby, in the tree-tops," Pard; you can't fool that youngster with any architectural basso-relievo bellowings. Or maybe he had been putting up stove-pipes; or

had forgotten to bring the beefsteak when he came home — though we fancy it must have been the stove-pipe. No it wasn't; here it is: You hadn't split the wood! you know you hadn't!! and Mrs. F. didn't give you any breakfast!!! Served you right, young man; served you edzactly right! Always split the wood first thing when you go home!

Dellie Wood has gone to attend the Manhattan Agricultural College.—[Emporia News.]

We notice the name of John H. Blanc, enrolled among the students at the Agricultural College, from Coffey County, for 1876.—[Burlington Patriot.]

Up at the College, when you see a piece of paper tacked on door, with a key and the map of the Eastern Continent (Africa pointing heavenward) drawn thereon, it means that a key is over the door. It's phonography.—[Enterprise.]

The list of students at the State Agricultural College at Manhattan numbers 145. Miss Ida Willey, Jas. H. Lynch, O. D. Huling, J. H. Freiligh, Miriam Failyer, Mariam Failyer, and George H. Failyer, are from Cherokee county. We hope Miss Ida will take good care of the delegation and send us an occasional letter from the school.—[Baxter Springs Republican.]

Answers to Correspondents.

TERMS OF ADMISSION.

Candidates for admission must be fourteen years of age and pass a satisfactory examination in reading; arithmetic, through decimal fractions; English grammar, to syntax. Classes are started at the beginning of each term in Drill in Arithmetic and Drill in English; and the pupil must have the knowledge above indicated, else he will be unable to retain position if admitted.

Pupils will be received at any time during the year, if able to pass an additional examination upon the subjects studied by the classes which they expect to enter. But they will find it very greatly to their advantage to be present at the opening of each term, or as soon thereafter as possible.

INDUSTRIAL DEPARTMENTS.

Having knowledge in the head is one thing; ability to use it with the tongue, fingers or feet is quite another thing. Both are vital to success in practical life. A man might thoroughly understand the theoretical principles of carpentry, and yet, not having used the tools, be wholly unable to earn carpenter's wages. So in all other vocations, Accordingly, instruction is given in the following well-equipped Industrial Departments, and every student, at his or her choice, is required to recite in some one of them:

FOR MALE STUDENTS.	FOR FEMALE STUDENTS.
The Farm.	Dress-making.
The Nursery.	Printing.
Carpenter Shop.	Telegraphy.
Cabinet Shop.	Scroll-Sawing, Carving.
Wagon Shop.	Engraving.
Blacksmith Shop.	Photography.
Turning.	Instrumental Music.

Each of these departments is conducted exactly as in daily life, and aims to give precisely the drill received by an apprentice. No charge is made, either for tuition or material, from male students taking the Industrials provided for them, nor from female students taking the ones provided for them, except in the department of Instrumental music, where a fee of \$15 for a term of seventeen weeks, or \$1 per week for a shorter period, is assessed for the use of pianos or organs. Male students taking either Printing or Telegraphy are charged \$1 per month for the use of material and instruments; an opportunity being afforded to advanced pupils in these two departments to "work out" this charge if they so desire.

LABOR.

Manual labor by the students may be for either of two purposes: First, to acquire skill in a given art; second, to earn money. In the first case, the labor is educational; in the second, it should be paid for by the party benefited.

EDUCATIONAL LABOR.—Manual labor in the recitations of the Industrial Departments, like mental labor in those of the literary departments, is purely educational and will not be remunerated. While the interest of the student will be held

paramount in the direction of this labor, the practice necessary to dexterity will be required.

REMUNERATED LABOR.—When the Institution needs labor on the Farm or elsewhere, which is not educational but simply for its own profit, and which a student is able and willing to perform, it becomes an employer instead of a teacher, and he an employe instead of a scholar. It pays for work; he works for pay. The relation between them is commercial, not educational; and both parties must act upon business principles. Hence, the College will only furnish such employment as its own interests require, and will pay according to the value of the service rendered at from three to ten cents an hour.

AMOUNT EARNED.

It is impossible to say how much any one can earn, since that depends upon what the student can do and what work there is to be done. Some are making one-half their expenses, some the whole, and exceptional men have made more than expenses. As a rule, a faithful boy skilled in farm work can earn half his expenses by entering the Labor Class of Practical Agriculture. During the year he can ordinarily acquire sufficient skill in the wood or iron shops to enable him to make articles for sale. The whole question is one for his own consideration and decision; and he should not be too sanguine. We can teach all who come, but it is impossible for us to promise anything more.

EXPENSES.

Except as above noted, there are no charges whatever for attendance, either in the shape of tuition or contingent fees. Furnishing an absolutely free education is as much as can be reasonably asked; and the Institution neither boards, clothes, nor supplies the student with text-books. Boarding can be obtained in private families at from \$3 to \$4 per week. Washing costs from seventy-five cents to one dollar per dozen. Text-books, which can be procured in Manhattan, cost from \$2.50 to \$5 per term.

No student need expend over \$5 or \$5.50 per week; and many of our best men are living at from \$2 to \$4 per week. Students desiring to "board themselves," can do so at from \$1.25 to \$2 per week. In a club of four young men, renting a house, the average cost to each for the term was \$1.11 per week.

Students' Column.

Attention Websters! Why can't you be at the opening exercises of your meeting? Last Saturday evening there was not a sufficient number present to elect the petitioning candidates. We have four to vote upon next Saturday evening; so make it a point to be on hand early.

The question for next meeting is, "Was Cortez justifiable in his conquest of Mexico?" At the last meeting, Leasure, La Tourrette, Williamson, Travelute and some others, had quite a dispute on a point of order. The members are inclined to notice every contestable point, and we anticipate some warm debates as to what is parliamentary. In order to shorten the exercises, written debates will be discontinued.

JED.

The Alpha Betas again shine as brightly as ever. They had a rousing meeting Friday afternoon. The question under discussion was of a religious nature, and both speakers and audience evinced much interest in the debate, and anxiety as to the decision.

Considerable accessions are being made to the membership of the Society, and, with an increase in members and interest, the Alpha Betas will cope successfully with any of the other societies. The question for discussion next week reads as follows: "Resolved, That the Cooper and Carey platforms are better than either of the other platforms." Two weeks from next Friday the Society will convene as a moot-court, at which some fun may be expected.

We forgot to mention the Gleaner, which was edited and read by Mr. Ulrich and Miss Child, and the manner in which it was prepared reflected credit upon them.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any paper furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegaph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Register, Great Bend. Daily and weekly. Only daily within 219 miles. A. J. Hossington, Editor and Proprietor. 22-1m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibberts & Co. 16-1m

Press, Girard. Established 1869. Official paper of county and city. Republican in politics. Wasser & Riddle, Editors and Proprietors. 22-1m

News, Peru. F. G. Moore & Co., Publishers and Proprietors. \$1.50 per year. A newsy sheet published in the interests of Chautauqua county. 22-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Kansas Farmer, Topeka. The State Agricultural Journal. In its 14th year. Eight pages; weekly. Sample copies free. J. K. Hudson, Editor. 22-1m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis," \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor.

Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$5; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

Courier, Columbus. Leading paper in Cherokee county. Politically, Republican. S. O. McDowell, Editor and Proprietor. 14-1m

Examiner, Hutchinson. An independent, Democratic newspaper. Published every Friday. Official paper of city and county. \$2.00 per annum. Wm. J. Turpen, Proprietor. 22

Monitor, Jewell Centre, \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14

American Young Folks, Topeka. An illustrated monthly paper for boys and girls. Fifty cents per year. Sample copy free. Address, American Young Folks, Topeka, Kas.

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

A Thorough and Direct Education, at the Kansas State Agricultural College, for the Farm, Orchard, Shop and Store. Tuition Absolutely Free! The Fall Term began Thursday, August 24th, 1876.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

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Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects imminical to the Kansas Farmer

Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

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Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms have been fitted up in a comfortable and attractive style.

Printing!—Daily instruction and drill in the work of a First-Class Printer. The Literary Departments offer a thorough education in the construction and use of the English Language, as employed by the Proof-Reader; in Book-Keeping; and in Industrial Drawing, as the best developer of that taste necessarily exercised by every good Job Printer. The Printing Department is well furnished with all the facilities for a speedy mastery of the art of Printing, and is in charge of a practical printer. Besides regular class instruction in printing, the weekly publication of the INDUSTRIALIST by the Department furnishes advanced students the requisite drill in newspaper work.

KANSAS STATE AGRICULTURAL COLLEGE.

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THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life. The Farmer's Course is the leading one of the Institution.

MECHANIC'S COURSE.

To Mechanics, in addition to the studies of the Farmer's Course, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

WOMAN'S COURSE.

The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

—TUITION ABSOLUTELY FREE!—

No contingent fees, except for use of pianos and organs in the Musical Department; and a charge of \$1.00 per month for material and instruments used by male students in Printing and Telegraph Departments. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR:—Fall Term began Thursday, Aug. 24th, and will close Thursday, Dec. 21st, 1876.

For further information, apply to
J. A. ANDERSON, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE,

VOL. II.

MANHATTAN, KANSAS, THURSDAY, OCTOBER 5, 1876.

No. 25.

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Hard to beat—boiled eggs.

Larvae red ants suck g-hopper eggs.

Iola buys hay at two dollars per ton.

Coffey county has a 25 inch coal vein.

Immigrants flocking into Hutchinson.

G-hoppers in Texas, Kentucky and Ohio.

St. Mary's pays thirty-five cents for corn.

Immigrants rolling into Republic county.

Good words for the young—dinner's ready.

Prentiss wants an "Early Fuel" variety of corn.

A man of see date tendencies—the chronolog-

ist.

Wilson county farmers have a good crop of tobacco.

Council Grove ships brooms by car load to Denver.

The gilt-edged name for hay is "grass a la mowed."

New York City devours 4,000,000 barrels of flour per year.

A Topeka four-acre vineyard sold 15,000 pounds of grapes.

Railroads are pushed for cars to haul out Kansas grain.

Flies now sit up on their hind legs and warm their feet.

New York eats or ships \$10,000,000 worth of oysters a year.

A Cowley county spring discharges 430,000 gallons per day.

When does a fellow feel the most solemn? When he's a-musing.

The Enterprise woolen mills manufacture superior goods.

Dodge City goes into the vigilance-committee line of business.

Wamego Blade suggests a law offering bounty for gopher eggs.

When last heard from the profane stove-pipe was at St. Mary's.

Americus takes 600 bushels of apples from a two-acre orchard.

America ships fresh beef to London and the trade is increasing.

Jewell county farmers have planted great numbers of forest trees.

Wabaunsee county corn averages seventy-five bushels to the acre.

Wichita hoppers are Jiltz patent augurs when they strike hard-pan.

Missouri farmers report that mixing varieties of wheat for seed pays.

A prudent man is like a pin; his head prevents him from going too far.

Scotland clears land by blowing out stumps and boulders with dynamite.

George W. Martin owns twelve histories of Kansas, all written prior to 1858.

Rains have damaged Illinois more this year than hopper grasses have Kansas.

G-hoppers have seriously damaged Kansas crops only once since 1860, viz.: 1874.

The last curiosity is a wheel that came off a dog's tail when it was a-waggin'.

Burlington tomatoes weigh two pounds each, and a two-foot beet, sixteen pounds.

Everybody is sorry to part with Web. Wilder who takes charge of the St. Joe. Herald.

Geo. W. Martin has taken a Centennial premium for book-binding. Good for Kansas!

Wheat and Grasshoppers.

How shall we get a crop of wheat next season, despite the grasshoppers? is the question now paramount to all others with people of our country. The season has become so advanced that I have but little hope of the 'hoppers leaving entirely. The few that are here will gather upon the wheat fields during the day, and eat the young wheat as fast as it comes up. As the nights get cooler, they will shelter themselves in corn fields, stubble, weeds and especially the prairie grass that adjoins the wheat fields; and, warmed by the midday sun, hop out into the fields and keep the wheat destroyed. I conclude, therefore, that if the wheat is sown so as to come up before a killing freeze to the grasshoppers, it will, with perhaps an exception here and there, be ruined. Therefore, I have determined to seed my wheat so late that it will not come up this fall. To do that, I shall plow all my sod, leaving the ground rough, and, governed somewhat by the activity of the grasshoppers, delay sowing for two, three or four weeks; which I will do upon such ground by sowing broadcast upon the furrow, getting the grain in as deep as possible. At that time, upon any unplowed sod, I will sow the seed and plow it under and harrow smooth afterwards—the idea being to have the grain down where it be kept moist during the winter. It will not answer to sow wheat so late upon the sod without plowing it, because the grain is too near the surface, and is ruined long before spring by sprouting when wet and easily shrivelled and killed by a little dry weather. Again, upon old ground I shall plow, harrow smooth, make it compact, and then drill deep as it is possible. I shall do this and keep sowing, if it is not prudent earlier, as late as the middle or last of November. I have talked with a number of our oldest and most experienced farmers, and they all agree that the prospect for a crop sown in such a way is very nearly if not quite an average one; that if wheat is not sown early enough to get a good growth in the fall, it is best that it should not come up until spring. I can say very emphatically that I do not fear any particular damage from young grasshoppers next spring; but where the eggs are very thick, along the bends of a creek for instance, the ground should be plowed. The thing to do now is to go ahead and plow with all your might. In the next issue I will detail the experience of some of our farmers who were here in 1866, when the 'hoppers remained till they were killed by freezing; and also about their crops the following season.—[T. C. Henry, in Abilene Chronicle.]

The Agricultural College.

ride in his buggy to this admirably arranged and ably conducted State Institution. Like a great many others, I have always been somewhat prejudiced against the Agricultural College, regarding it as a kind of humbug where the people's money was freely expended for the special benefit of a long list of "professors," whose principal duties consisted in putting in three or four hours' easy work per day, and drawing their salary with punctilio regularity. But my eyes have been opened, and all my former prejudices have been removed. I now vote the Agricultural College a big thing, which, in the language of President John A. Anderson, "must be seen to be properly appreciated." President Anderson took pains in showing us around and explaining to us how the people's money had been expended. Out of \$15,000 appropriated by the Legislature last winter, "the old barn" has been most admirably fitted up for recitation rooms, and two other large buildings have been erected, and a third containing a cabinet shop. The printing, telegraph, musical and millinery departments, have been most elegantly finished and furnished.

After showing us through all the various departments above named, and introducing us to all the professors, President Anderson turned us over to E. M. Shelton, Professor of Practical Agriculture and Superintendent of the Farm. By him we were shown all over the farm and introduced to his celebrated "shorthorns" and other blooded animals. The farm is most admirably conducted, and all branches of agriculture practically and successfully taught. Here are to be seen some of the finest blooded cattle and hogs in the State, and Prof. Shelton must be given the credit of making his department pay more than treble its expenses. At present there are one hundred and fifty students in attendance, all of whom are from Kansas, with the exception of eight, who hail from New York, Pennsylvania, New Mexico, Indiana and Iowa.

Those who are laboring under the impression that the State Agricultural College is a swindle, should pay it a personal visit, when all their doubts and suspicions will be permanently removed.—[Pioneer, in Topeka Commonwealth.]

ONE of the most sensible changes in the new postal law, which everybody will appreciate, is that which allows a person to write his or her name on a newspaper wrapper, and also the word "from" to let the party know who it is from, without violating the law. It allows the sender to write on a package the number and kind of articles it contains.

THE poor woman who buys a sewing machine on the installment plan in New York and pays all but a small amount, cannot be deprived of the machine by the company unless the value of the machine is returned to her in hard cash. Thus say the courts of the metropolis, and we guess the Supreme Court of Kansas would render a similar decision if a case were before it.—[Champion.]

THE INDUSTRIALIST.

THURSDAY, OCTOBER 5, 1876.

JNO. A. ANDERSON, J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

An Explanation.

Students at Manhattan will hereafter be charged one dollar per month for the use of material in the printing and telegraph offices.—[News Item.]

We don't know how it is in telegraph offices, but in printing offices the usual practice is to pay those who are learning the business a few dollars per month. With its eighteen thousand income, its large annual appropriations, and its extra charges on students, the Manhattan school ought to get along tolerably well, without feeling the hard times which are pinching everything and everybody else.—[Emporia News.]

The "item" should read: "MALE students will hereafter be charged, etc." Printing and telegraphy are taught as industrials for girls, and if boys wish to take them they can pay the small sum required. No fee is asked from boys taking any one of the half dozen industrials provided for male students.

The usual practice in printing offices is to take an apprentice for not less than two or three years. It has his services for ten hours a day. During the first months he does enough roust-about work to justify the office in paying him a few dollars per month, and during the latter portion of the term his work as a compositor is really worth a good deal more than any office pays him. If it were not, proprietors would never be bothered with apprentices. On the other hand, our students spend fifty minutes a day, during five days per week, in the printing office, and devote that time solely to receiving instruction or to practice in type-setting. They neither sweep the office, build fires, nor split the editor's wood. Any business man who has successfully conducted such a paper as the News will clearly see the difference between these two kinds of apprenticeships; and we are greatly mistaken if Mr. Stotler would, as a matter of business, pay even a few cents per month for the privilege of teaching an apprentice fifty minutes a day, to the exclusion of all other work.

In regard to the \$18,000 income of the Agricultural College, we are very glad that the wisdom of our predecessors has ensured this amount, and heartily wish that both the University and Emporia Normal School were in a similar condition. The College had a Congressional grant of 81,601 acres, the University one of 45,886 acres, and the Emporia Normal a State grant of 38,400 acres. The College adopted the policy of selling its land, hence its present income; the other institutions preferred to hold their land, and hence their lack of income. In 1873 the University lands were appraised at \$172,072.50, and the Emporia lands at

\$250,000. Ten per cent interest on these sums would give the former \$17,000 and the latter \$25,000 a year; and all will agree that such incomes would be far preferable to dependence on annual legislation, both for the institutions themselves and for the general educational interest of the State.

In regard to the "large annual appropriations" made to the College, we fancy that this is a relative question. Emporia furnishes a normal, the University a professional, and the College an industrial education. Of the persons following an occupation in Kansas, a little more than one (1.13 per cent) in a hundred are teachers; less than two (1.71) in a hundred are lawyers, doctors or preachers; while ninety-seven (97.00) in a hundred are farmers, mechanics, or other industrialists. So that if the relative proportions of those classes be considered for whose benefit the State furnishes an education, we rather imagine the annual appropriations to the College have not been "large" as compared with other appropriations. And the same is true of the aggregate of the appropriations themselves. Since their establishment the three institutions had received from the State, up to 1876, as follows: Emporia Normal, not counting a land grant worth \$250,000, \$165,930.13; University, \$202,655.90; Agricultural College, \$119,227.32. So that Emporia has received \$46,000 and the University \$83,000 more than has the College; and while in one sense each of these sums is "large," yet, relatively, the amount given to the institution provided for the practical education of the masses, the ninety-seven instead of the three, is anything but "large."

As before remarked, we sincerely wish that each of those institutions had an income equal to ours, and just as sincerely do we wish that the College had buildings equal in value to the \$150,000 one at Lawrence, or the \$80,000 one at Emporia. They are fortunate in some respects, we are fortunate in others. We have always rejoiced and shall always rejoice in their prosperity; have shared in their sorrow; and don't see any particular reason why the News or any body else should pitch into us.

Book Notice.

"American Dairying," a manual for butter and cheese-makers, is a practical work, written by a practical man who has long been considered as the best authority in this country on all subjects connected with dairying. We refer to Prof. L. B. Arnold, the dairy correspondent of the New York Tribune.

Prof. Arnold's work is really a scientific treatise, written in a plain, common sense style. The range of topics discussed is extensive. Dairy Stock, Food for Dairy Stock, Milk, Butter-Making, Cheese-Making, The

Management of Butter and Cheese Factories, are the headings of the principal chapters. The chapter on milk is alone worth the price of the volume. Every farmer who keeps cows should read that chapter; every farmer's wife whose butter does not now command the highest market price, may learn something to her advantage in the same chapter. No one who is ignorant of the composition and properties of milk, can habitually make "gilt-edged butter."

In short, if the farmers of Kansas would thoroughly acquaint themselves with the principles so clearly set forth by Prof. Arnold in this admirable book, the value of the present annual dairy products of the State would be doubled. The book contains 350 pages, and is sent post-paid to any address for \$1.50, by the Tribune Co., New York.—[Prof. Ward.]

American Industry.

The London Times of August 14th gives unusual prominence to a letter written by an English Judge at the Centennial, who says he saw enough there to convince him that American manufacturers had been making remarkable strides during the past twenty years. Mr. Douglas Galton was a British Judge in the group of "Railway Appliances," and immediately upon his return home he penned this letter. He had previously visited this country twenty years ago, and during the interval we all know that American manufacturing progress has been remarkable. He speaks of the great advance in our industries as shown by the growth in the amount of coal mined, and says that our higher wages, compared to England, are counterbalanced by the use of machinery to an extent much exceeding that generally in use in England. Observing the substitution of steel for iron rails on our railways, he candidly remarks that the new rails are almost all made in the United States, and that it is not probable that England will be called upon much longer to supply us with rails. He goes further and, speaking of general manufactures, says England not only can no longer expect to get a market for her manufactures in the United States, but she must be prepared to find our manufacturers competing with her in every market to which they have access. Mr. Galton bluntly tells the Times that England should appreciate her true position in this matter, and he closes by urging all Englishmen to visit Philadelphia, where they can see the development of American industry, and meet the leading manufacturers as well as the most prominent Americans of all classes. To this just and candid letter the London Times has given the prominence of its largest type and conspicuous position, a dignity reserved for its most important communications.—[Atchison Champion.]

Hiram Ward, Esq., left with us a sample of corn that was planted on the 15th of May, and which ripened by the first of September—116 days from planting. This variety is called the Yellow Dent, and from the fact that it matures sooner than any other kind of corn, we should think it a very valuable variety to raise in this latitude where dry summers are frequent.—[Osage Chronicle.]

B. F. Griffin, of Pottawatomie county, planted King Phillip corn on the 3d of May, and it was ripe on the 10th of August.—[Nationalist.]

THE INDUSTRIALIST.

THURSDAY, OCTOBER 5, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 P. M. and 5:45 A. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER, Agent.

Number of students enrolled this term, 163.

President Anderson started for Topeka and Lawrence Wednesday morning.

Enrolled since last report: Bettie Young, Riley county; and Horace B. Jones, Wabaunsee county.

The wedding in Manhattan the other evening is said to have passed off pleasantly, although dissatisfaction exists in some quarters.

The weather during the week has been quite winterish, and a frost has greeted our eyes nearly every morning—when we were up early enough.

Mrs. Starrett, of Lawrence, lectured in Manhattan on Monday evening, to a very intelligent audience. Subject: "What shall we do with our girls?"

Prof. Ward's team ran away last Tuesday afternoon, throwing him from the buggy, which it damaged considerably. Luckily, he was not injured any.

The State Association of the Christian Church was held in Manhattan this week, and several of the delegates improved the opportunity to visit the College.

A circus is billed to exhibit in Manhattan, Thursday, October 19th. The circus has taken more money from the people of Kansas this year than the grasshoppers have.

Clay Crouse is studying law in Oswego, Labette county. Hope he will read Blackstone with the same avidity once displayed in reading Peck & Snyder's Base-Ball Guide.

The masons have nearly finished pointing the horticultural building. The carpenters are through shingling, and all the force will now be concentrated on the inside work.

We imagine that if it were in order for horses to talk, those belonging to Profs. Kedzie and Ward would make known their gratitude for the sheds erected to protect them from the storms of winter. Very humane acts, indeed.

L. B. Rogers illuminated our office on Wednesday afternoon with his smiling countenance. L. B. is one of the best students this Institution ever had, having attended for several years. He was on his way to a St. Louis Law School, whither he has gone to finish his education and prepare for his chosen vocation.

We had the pleasure of a day in the Junction City Fair, on our old ground and among old friends. The Fair was a decided success every way, and the gentlemen having it in charge had the best of grounds for feeling that their labors were neither unappreciated nor ineffective. One or two things struck us as being especially sensible, and as worthy of note in other counties. The first was the location of the Fair near the center of the town, and convenient to hotels, stores and dwelling houses. Anything needed could be obtained in five minutes, and there was no necessity for visitors to hunt up a conveyance. A second thing was the fact that the expenses were kept down by the volunteering of everybody to do anything needed to be done. Instead of one or two gentlemen being pressed to death by rushing hither and yon, there were "aids" enough to go everywhere and stir up everybody and thing in less time than it takes to tell it. It was the same

old Junction that we used to know, working in the same old way.

Perhaps we are partial to that burg; and perhaps we have a right to be. Going back on one's friends isn't a habit with this aforesaid, and we rejoiced multitudinously and every hour in old memories and with old friends. God bless them all!

The Enterprise is responsible for the following locals:

The careful housewife has just finished putting up her winter's stock of preserves, and the thoughtful husband is just commencing to put them down.

The distinguished visitors who were here last Friday, visited the Agricultural College Saturday afternoon. They must have been well treated for they returned very highly gratified by their visit.

Some breeze wafted a cottonwood seed to the tin gutter which lines the roof of the Presbyterian church. There it has taken root among some rubbish, and grown about a foot and a half in height, put forth leaves, and is one of the many evidences of the fertility of even a Kansas church eaves-trough.

Students' Column.

W. H. Jenkins, who attended College a year or more ago, has gone and done it. Yes he has. We hate to tell, but then we must. He has gone and—got married. Well, "Jenks," we never thought that of you, but then peace be to your ashes. The fatal deed was perpetrated at Topeka, on the 26th ult., after which the party struck for the mountains.

The Websters made arrangements last Saturday evening for a moot-court to be held in two weeks. These moot-courts were introduced by the Websters two years ago, and have been an interesting feature in the exercises of the College societies since.

Although the Websters do not forbid the making of a woman a member, they have had no lady petitioners. Nevertheless, they have the largest society in the College; and at the last meeting they came early enough to send in a little three-fourths vote, and elected some more new members. They have received ten new members this term, and they are such as add lustre to the Society.

The question for next Saturday evening is something about poverty and riches influencing the characters of men.

The members of other societies, and even students who do not wish to become members of any society, are cordially welcomed to come and listen. The Websters always have something entertaining.

JED.

Telegraphy.—Four miles of line, twenty-five line instruments, and daily instruction and drill by an experienced operator.

The Industrialist.—A small, weekly paper, edited by the Faculty and containing fresh articles on the Farm, Orchard and Education.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets.

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Vocal Music.—Regular instruction and drill in the science and art of vocal music, without charge. Recitations in these classes are not reckoned as an "industrial."

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan.

37-3m

Clother.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan.

37-3m

Mechanical Department.—Regular instruction and practice in Carpentry, Cabinet-Making, Turning, Scroll-Sawing, Wagon-Making, Blacksmithing and Painting.

Dress-Making and Millinery.—Daily instruction and drill in hand and machine sewing; cutting, fitting and making dresses; and all branches of millinery, by a practical teacher.

Standard Stock! Standard Work!! Standard Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

Gardening for Profit.—Instruction and drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening, and Kansas Forestry.

Farming for Profit.—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography and Household Chemistry.

Kansas Publishing House.—Standard Stock, Standard Work, Standard Prices, to be had at the Bindery and Blank Book Manufactory of George W. Martin, Topeka, Kansas. Orders from counties and townships solicited. All sorts of books made, bound and rebound. Legal Blanks, Seals, Stationery and Job Printing.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects imminical to the Kansas Farmer.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order.

30-tf GEO. W. MARTIN, Publisher.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms have been fitted up in a comfortable and attractive style.

Printing!—Daily instruction and drill in the work of a First-Class Printer. The Literary Departments offer a thorough education in the construction and use of the English Language, as employed by the Proof-Reader; in Book-Keeping; and in Industrial Drawing, as the best developer of that taste necessarily exercised by every good Job Printer. The Printing Department is well furnished with all the facilities for a speedy mastery of the art of Printing, and is in charge of a practical printer. Besides regular class instruction in printing, the weekly publication of the INDUSTRIALIST by the Department furnishes advanced students the requisite drill in newspaper work.

THE INDUSTRIALIST.

THURSDAY, OCTOBER 5, 1876.

Entomological Notes and Queries.

New Locust Theory Wanted.—We want a new theory on the grasshopper question. On the 7th and 8th they flew north in much larger quantities than ever before seen in this country. To-day they are going south in equally as large quantities—the sky heavily clouded, and this one of the wettest seasons we have had in six years. We would be glad to hear from you through our county paper, or as may suit your convenience.

W. T. D.

Abilene, Kan., Sep. 9.
I do not think any new theory is wanted. We have theories enough; we want a few more facts, especially as to the natural breeding places of the pest. We have learned pretty much all that is to be learned about it and its doings in the country it occasionally invades, but in which it is not indigenous; but we have much yet to learn of it in the extreme northwest. It is partly owing to the wet season in Missouri and Kansas that I have based my hopes that these two States will not suffer as they did in 1874.—[Prof. C. V. Riley, in Colman's Rural World.]

An Old Kansas Farmer.

In our rambles through the market yesterday, we met Mr. Moses R. Grinter, who has lived on the same farm in Kansas for forty-six years. Mr. Grinter lives where he first located in the Kansas valley, on the north side of the river, ten miles west of Kansas City. He is fairly entitled to be called the "patriarch of Kansas," for we believe he is the oldest farmer in the State. He says that during his residence in Kansas, now nearly half a century, the grasshoppers have only visited his locality twice, once in 1867-8 and again in 1874-5. Mr. Grinter has raised good crops every year but in 1858, when he had only half a crop. He says with the exception of oats he never had better crops than the present year. After an experience in Kansas of nearly half a century, he has no fear of the grasshoppers.

Mr. Grinter raises fruit among other things. He has 1,011 apple trees and an abundance of peach and cherry trees. He came into the city on a load of very fine apples from his orchard. Mr. Grinter is now nearly three score years and ten, and bids fair to enjoy life for many years to come. He is perfectly contented with his Kansas home, and speaks with considerable interest of an old discussion which he had in the Tribune with Horace Greeley, who tried to prove up the reality of the "Great American Desert."—[Kansas City Journal of Commerce.]

In the eastern States, we see by the papers, the wages of farm hands have fallen considerably. Good average hands get twelve dollars per month. An extra good hand may occasionally get fifteen dollars a month, while ordinary hands get only from eight to twelve dollars per month. Of course the price of labor must fall with other commodities. If the specie resumptionists can have their way, in a year from now wages will be much lower.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any paper furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Telegraph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

Register, Great Bend. Daily and weekly. Only daily within 219 miles. A. J. Hossington, Editor and Proprietor. 22-1m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibberts & Co. 16-1m

Press, Girard. Established 1869. Official paper of county and city. Republican in politics. Wasser & Riddle, Editors and Proprietors. 22-1m

News, Peru. F. G. Moore & Co., Publishers and Proprietors. \$1.50 per year. A newsy sheet published in the interests of Chautauqua county. 22-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Kansas Farmer, Topeka. The State Agricultural Journal. In its 14th year. Eight pages; weekly. Sample copies free. J. K. Hudson, Editor. 22-1m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis." \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor.

Courier, Independence. Daily and weekly. The only daily in southern Kansas. Daily, \$5; weekly, \$1. Chock full of news. Try it. J. J. Chatham, Editor and Proprietor. 14-1m

Courier, Columbus. Leading paper in Cherokee county. Politically, Republican. S. O. McDowell, Editor and Proprietor. 14-1m

Examiner, Hutchinson. An independent, Democratic newspaper. Published every Friday. Official paper of city and county. \$2.00 per annum. Wm. J. Turpen, Proprietor. 22-1m

Monitor, Jewell Centre. \$1.50 a year. A 24-column weekly devoted to the interests of Jewell county. Official paper of the county. Byron J. Thompson, Editor and Proprietor. 14-1m

American Young Folks, Topeka. An illustrated monthly paper for boys and girls. Fifty cents per year. Sample copy free. Address, American Young Folks, Topeka, Kas.

Times, Lyndon. A spicy, local newspaper devoted to the interests of Lyndon and Osage county. Independently independent in politics. Terms, \$1.50. Miller Bros., Editors and Proprietors. 14-1m

Special for Woman.—Special lectures on Farm Economy, by Prof. Shelton, discussing the Dairy, Poultry, etc. Gardening, by Prof. Gale, treating of the vegetable, flower, commercial and ornamental. Household Chemistry, by Prof. Kedzie, consisting of the chemistry of cooking, bread, tea and coffee, butter, cheese, dyeing and coloring, bleaching, disinfectants, ventilation, etc. Special Hygiene, by Mrs. Cripps.

County and District Official School Record Books, by Prof. S. A. Felter. Conforming strictly to the Revised School Law of the State of Kansas, the recommendations of the National Teachers' Association, and the requirements of the National Bureau of Education, of Washington, D. C. Approved by the State Superintendent of Public Instruction. Manufactured exclusively by the Kansas Publishing House, Topeka.

KANSAS STATE HT AGRICULTURAL COLLEGE.

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FACULTY.

JNO. A. ANDERSON, Pres., Prof. Polit'l. Economy.
M. L. WARD, Prof. Mathematics and English.
WM. K. KEDZIE, Prof. Chemistry and Physics.
E. M. SHELTON, Prof. Prac. Agricul., Sup't Farm.
E. GALE, Prof. Botany and Horticulture.
J. E. PLATT, Prof. Elemt'y English, Mathematics.
C. V. RILEY, Lecturer on Entomology.
D. J. BREWER, Lecturer on Practical Law.
A. TODD, Sup't Mechanical Department.
A. A. STEWART, Sup't Printing Department.
W. C. STEWART, Sup't Telegraph Department.
MRS. M. E. CRIPPS, Sup't Sewing Department.
MRS. M. L. WARD, Teacher of German and French.
MRS. E. M. KEDZIE, Teacher Industrial Drawing.
MRS. H. V. WERDEN, Teacher of Inst'm'l Music.
GEORGE H. FAILYER, Assistant in Chemistry.

THIS College furnishes a thorough and direct education to those who intend to be Farmers, Mechanics, or to follow other Industrial Pursuits. As a foundation for each course of study, and for success in daily life, the first object is to make every student an expert in the use of the English Language as an art; and, also, an expert in Practical Mathematics, including skill in the use of numbers; in the use of lines, or Industrial Drawing; in Book-Keeping and Practical Law. Words, numbers and lines are the tools used by all industrialists in conveying or preserving ideas; and our endeavor is to make the student a ready workman in the art of using these tools for practical purposes, rather than to make him a critic of fancy English or a professor of abstract Mathematics.

FARMER'S COURSE.

Building on this foundation, the special object of the Farmer's Course is to give the student a practical knowledge of the Structure, Growth, and Value of Plants; of light, heat, and moisture; and of Inorganic, Organic, Analytical, and Agricultural Chemistry, as these are related to Plant and Animal Growth; of Economic Zoology; and particularly of Practical Agriculture and Horticulture, including such instruction and drill in the Field, in the handling of Stock, in the Nursery, in the Wood and Iron Shops, as will enable the graduate to perform readily each of the varied operations of actual Farm Life. The Farmer's Course is the leading one of the Institution.

MECHANIC'S COURSE.

To Mechanics, in addition to the studies of the Farmer's Course, applied Mathematics and Industrial Drawing are more extensively taught. Besides this literary education, the student is taught daily in the particular workshop of his trade. Special advantages are thus offered to those who wish an education as a Carpenter, Cabinet-maker, Wagon-maker, Blacksmith, Turner, Carver, Engraver, or Printer. No charge made for the use of tools or material for class practice.

WOMAN'S COURSE.

The course of study for woman is more practical, and, therefore, more sensible than that found in any other institution in the United States. The studies are shaped with reference to the liberal and direct education of woman as a woman instead of as a man, and as an industrialist instead of a butterfly. Among the special features of the course are Physiology and Special Hygiene, Household Economy, Farm Economy, Gardening, Household Chemistry, etc.

The workshops include those of the Milliner and Dress-maker, Printing, Telegraph, Scroll-Sawing, Carving, Engraving and Industrial Music.

Superior advantages are offered to students of higher Chemistry, to Mineralogists, Druggists, Operators, and Workers in metals.

Full collections of the Plants, Insects and Birds of Kansas, are being made as rapidly as possible.

TUITION ABSOLUTELY FREE!

No contingent fees, except for use of pianos and organs in the Musical Department; and a charge of \$1.00 per month for material and instruments used by male students in Printing and Telegraph Departments. Boarding ranges from \$2.75 to \$4.00 per week.

CALENDAR.—Fall Term began Thursday, Aug. 24th, and will close Thursday, Dec. 21st, 1876.

For further information, apply to
J. A. ANDERSON, President.

THE INDUSTRIALIST.

KANSAS STATE AGRICULTURAL COLLEGE.

VOL. II.

MANHATTAN, KANSAS, THURSDAY, OCTOBER 12, 1876.

No. 26.

THE INDUSTRIALIST. Published every Thursday by the PRINTING DEPARTMENT.

TERMS OF SUBSCRIPTION, 75 cents per year, postage prepaid. Payment absolutely in advance! Paper stopped at expiration of subscription.

Advertising rates made known on application. Address A. A. STEWART, Manhattan, Kas.

Boiled Down.

Dickinson Chronicle has a 52 inch bean-pod. Fifty cars of wheat arrive daily in Atchison. Grasshoppers are destroying cotton in Texas. Fultz wheat in Douglas yields 29½ to the acre. A Montgomery county orchard has 3,000 apple trees.

Ledger reports immigrants pouring through Emporia.

India rubber goods have depreciated twenty per cent.

Osborne county exhibits peaches from two-year-old trees.

A sod crop of broom-corn in Saline valley, leads all the rest.

Marshall county had a fifty bushels to the acre barley yield.

A ship of war becomes a ship of peace when she drops her rancor.

A circus scooped \$2,800 out of Osage Mission. "Money's skurse."

Sedgwick county farmers propose to sow wheat till November first.

It is no libel to call a dog that keeps barking all night a bar-keeper.

McPherson county with 8,900 population has no town larger than 300.

Allen county cows eat "jimson" weeds; cows and weeds both dead.

Prof. Riley begins his lectures at the Agricultural College Oct. 23d.

An early spring—jumping out of bed at five o'clock in the morning.

Bats and flies have got into the lowest depths of the Nevada silver mines.

What piece of carpentry becomes a gem as soon as it is finished? A-gate.

Clay County Dispatch reports a gang of horse thieves—with suggestions!

The potatoes in southern Michigan have nearly all been destroyed by potato bugs.

Empire reports a steady immigration through Concordia into north-western Kansas.

We know several fellows who had better go to Hays and sell themselves. Bones are there worth \$6.00.

The Solomon valley rejoices in nearly two crops of corn and the prospect of wintering numberless bovines.

Liverpool pays three cents more per bushel for Kansas corn than for that of any other State or country.

The Arkansas valley had its poorest wheat this year, yet the crop averages as good as that of western States.

Hays City is the center of a vast wheat field and the American Desert has gone to live with its grandmother.

The first cargo of American slates has arrived in England, and the article is cheaper and better than the Welsh.

"Boy, why do you gnaw those melon rinds?" "Cause the other feller got the start of me and gnawed the core!"

A man is 1,950 times as large as the common honey bee, and yet it is useless to try and argue the matter with the bee.

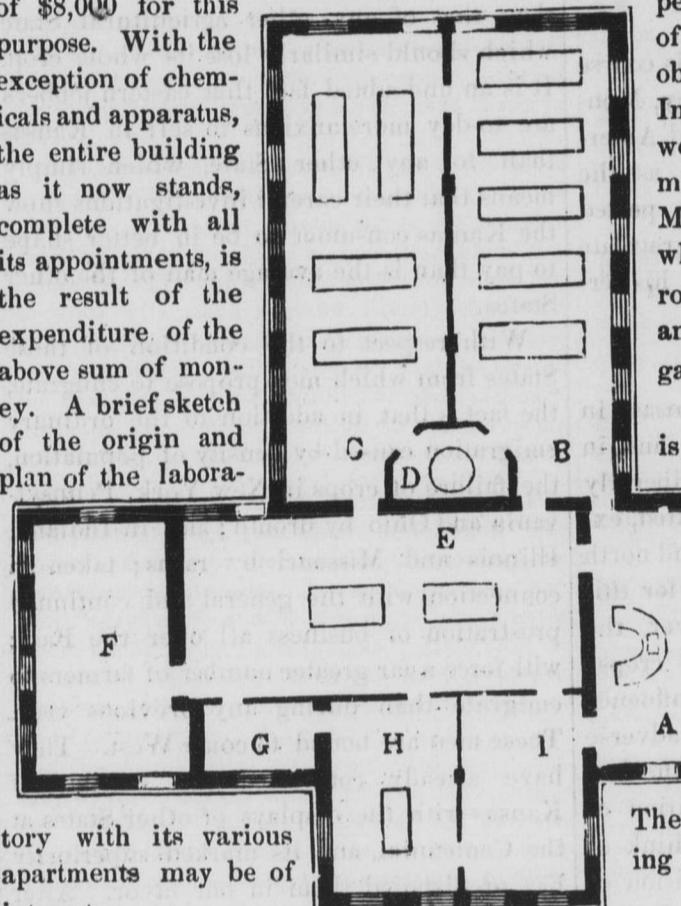
Salina shipped twenty-one car loads of broomcorn one Saturday, and wanted as many more cars for the supply at the depot.

The season is at hand when the pensive house fly hangs gloomily to the early morning wall, and wishes to gracious that some one would get up and build a fire.

The New Chemical Laboratory.

We herewith present the readers of the INDUSTRIALIST with a neat cut of the ground plan of our New Chemical Laboratory, just completed. The building has been erected in accordance with an act of the last Legislature appropriating the sum of \$8,000 for this

purpose. With the exception of chemicals and apparatus, the entire building as it now stands, complete with all its appointments, is the result of the expenditure of the above sum of money. A brief sketch of the origin and plan of the labora-



ROOMS AS LETTERED ON PLAN.

A—Lecture Room; B—Qualitative Laboratory; C—Quantitative Laboratory; D—Water-Tank Closet; E—Physical Laboratory; F—Kitchen Laboratory; G—Balance Room; H—Private Laboratory; I—The Office. The building faces East, and the front entrance is at the point "A." The accompanying cut was drawn and engraved by Mrs. Ella M. Kedzie.

HISTORY.

In the spring of 1875 Prof. Wm. K. Kedzie, of the Department of Chemistry and Physics, was authorized by the Board of Regents to visit Great Britain and Continental Europe for the purpose of making a thorough examination of the laboratories of the principal European Universities and Polytechnic Schools, with a view to constructing the most perfect plan possible for a chemical laboratory of our own, which the growing needs of the department imperatively demanded.

During a rapid six months' trip, most of the prominent laboratories of the Continent were visited and carefully studied; more particularly those of Bonn, Berlin, Leipzig, Gottingen, Halle, Heidelberg, Wiesbaden, Vienna, Geneva, and of the "College de France" and University of Paris.

In England, among the many visited, the magnificent new laboratory of Owen's College, Manchester, planned by Dr. Roscoe, was particularly studied. While all of these palatial laboratory buildings of course far exceed in extent anything which we could expect to construct here, yet in the peculiarities, plan and arrangement of each a host of valuable hints were obtained for use in our own building. Immediately on returning, the plans were drawn by Prof. Kedzie and submitted to the well-known architect, Mr. E. T. Carr, of Leavenworth, who combined and re-arranged the rooms as they now stand in the cut, and to whose skill and taste the elegant exterior of the building is due.

THE BUILDING
is of fine, gray limestone, and as seen in the plan is nearly cruciform in shape, 109x109 feet, one storied, with a high tower in the centre. From the ground to the tip of this spire is sixty feet. The entire interior finish of the building is of oiled and varnished pine.

THE VENTILATION
is accomplished not by the shaft system, which has proved an expensive failure in so many cases, but by a system of large movable sky-lights through the ceiling of the various laboratories, worked by rope and pulley. The sky-lights are protected from accident without by a covering of coarse wire gauze. By this means the air of the busiest laboratory is kept as fresh and wholesome as that of a home parlor.

THE DRAINAGE AND WATER SYSTEM
of the building is complete. In the closet marked "D" is a heavy boiler iron tank of fifty barrels capacity, mounted six feet from the floor, into which water flows directly from the roof. A six-inch overflow pipe connected with a main drain is also attached. From this tank water is conducted to every room and table in the building. The dark closet in which the tank is situated serves also as a general storage and supply room.

THE LECTURE ROOM
marked "A" is 32x35 feet. The seats as [Concluded on fourth page]

THE INDUSTRIALIST.

THURSDAY, OCTOBER 12, 1876.

JNO. A. ANDERSON. J. H. FOLKS,
Managing Editor. Business Manager.

ASSOCIATE EDITORS, MEMBERS OF THE FACULTY.

THE Kansas Churchman is an ably edited and very handsomely printed monthly, published in the interest of the Episcopal Church of the State, King block, 6th street, Topeka.

PERSONS desiring information concerning insects inimical to the Kansas farmer can address Prof. Chas. V. Riley, Agricultural College, Manhattan, on and after October 23d, 1876.

PROF. CHAS. V. RILEY begins his course of lectures on Practical Entomology, Monday, Oct. 23d. Both in Europe and America Prof. Riley is widely known as the most practical as well as the best posted man in his specialty, and we congratulate our students and State on securing his services.

Immigration Prospects.

The locust has again visited Kansas, in common with several other States, and in different sections eggs have been liberally deposited. No damage has yet resulted, except to fall wheat; while the frosts and north winds have put an end to the pests for this year. There still remains, however, the possibility of injury to next spring's crops; and this possibility exerts a greater influence upon immigration than any other adverse element. Two classes of facts affect the flow of population: the one is the condition of the country to which immigrants think of moving; and the other is the condition of the country from which they think of moving.

With respect to the first, Kansas is in far better shape than any of the western States. All of these have been more injured, either by locusts or deluging rains, than has it; so that in spite of the hopper, it still presents greater inducements to the prospector than do they. Its harvested crops will bring more ready money, per man, than will theirs; and its average farmer has made more during the last ten years than has theirs. For the purpose of estimating the present surplus crop of the State, it is fair to assume that the property in the shape of cattle, hogs, fruit, vegetables, barley, oats, rye, hay, etc., will amply support Kansas during the next year; and, therefore, that the wheat and corn crops may fairly be taken as representing the surplus. Although a greater breadth of wheat was sown last year than ever before, perhaps a quarter or a third greater, yet, on the supposition that this year's yield is only equal to that of last year, namely, 13,000,000 bushels, the wheat crop at seventy cents will realize \$9,000,000.

As last year's corn crop was 80,000,000 bushels, it is probable that the present crop will be 100,000,000, which at twenty cents is worth \$20,000,000. So that at least \$30,000,000 must during the next eight months inevitably go into the hands of the men who raised these crops, not to meet their current expenses but as clear profit. Every one can see the effect which such a sum distributed among the farmers will have upon every branch of business, upon the general "tone," and upon immigration. We believe that even should next year's crops prove a total failure the State would still be in as good or better financial condition than it was at the close of 1874, and in far better condition than that of any other agricultural State which should similarly lose its whole crop. It is an undoubted fact that eastern jobbers are to-day more anxious to sell in Kansas than to any other State, which simply means that their careful investigations show the Kansas consumer to be in better shape to pay than is the average man of the other States.

With respect to the condition of those States from which men propose to emigrate, the fact is that, in addition to the ordinary emigration caused by density of population, the failure of crops in New York, Pennsylvania and Ohio by drouth; and in Indiana, Illinois and Missouri by rains; taken in connection with the general and continued prostration of business all over the East; will force a far greater number of farmers to emigrate than during any previous year. These men are bound to come West. They have already contrasted the exhibit of Kansas with the displays of other States at the Centennial, and its marked superiority has predisposed them in our favor. After the elections they will prospect the tier of States reaching from the Lakes to Texas, and will find both the crops and tone of Kansas to be better than those of any other State in the tier. And though the Kansan should complain to them of the hopper-grasses which dined on the fall wheat and may lunch on ten per cent of the spring wheat, they will not forget what he has forgotten, namely, that the drouth, floods or bugs in their States have done a deal more damage to them than has the Caloptenus squirtus to him; and if he wants to try the East awhile they will be more than willing to swap farms on appraised value. We claim that these results will occur because of the natural causes which are steadily operating East and West; in other words because of the "market."

Our immigration will not be as heavy as it would have been had the Colorado and Nebraska hopper staid away, but it will be far greater than many persons now imagine; not because Kansas has no agricultural drawbacks, but because other States have greater drawbacks and because the people in

these States are satisfied that it yields a better profit to the farmer. Kansas isn't the only afflicted community on the globe; and though its whine is shrill and hair-triggered, yet that whine hasn't half the volume or a quarter the thorough-base that the whines of other States exhibit. Give us a rest!

Douglas County Fair.

A very sensible change characterizes the Fairs we have visited this year. They are smaller, more intensely "local," less pretentious, and with fewer shams than the exhibits of the "great Fair" period. The value of a Fair depends upon the character of the truths it presents and upon the vocations of the persons who inspect these truths. A farmer will be interested in a trial of plows; a cattle man in shorthorns; a horse fancier in races; a house-wife in quilted or pickled fixin's. If fairs are to benefit the farmer they should mould their exhibits accordingly. If they are for the amusement of a purely city population, the introduction of a few circuses and "hops" might prove profitable to the management.

As an amusement a Fair is a failure when compared with other amusements. Its main point and chief force is as an educational agency for the actual farmer, by exhibiting the crops, machines and stock of other farmers — with enough amusement to make the dish spicy. What men want is facts,—wheat, corn, potato and apple facts; grades and pure bloods; plows, mowers and reapers. And just in the degree that Fairs are local will the force of human nature impel the exhibition of facts valuable to the real worker of the soil, because this is pre-eminently an agricultural State.

For these reasons we were decidedly struck with the Douglas County Fair. It didn't pretend to be what it was not, and it was fairly and fully all that it claimed to be. The plowing match was not for the benefit of manufacturers, but a test showing the worth of a plow as an agricultural tool; and when the sulky plows completely buried the tangled growth of tall grass and weeds, we rather imagine that the farmers present gathered a more valuable lesson than simply the one whether John Doe or Richard Roe had the shrewdest agent. The exhibit of cattle and swine was good; ditto, of farm and race horses; and more than ditto, fruits and cereals. The Grange shed contained an admirable display. There was a strong element of sturdy common sense about the whole display, so far as we witnessed it; and this, together with the courtesy of old and new friends, impressed us with the belief that the Douglas County Fair was worth far more to the citizens of Douglas than would be a St Louis one, even were Lawrence St Louis.

THE INDUSTRIALIST.

THURSDAY, OCTOBER 12, 1876.

TIME-TABLE OF THE K. P. RAILWAY.

PASSENGER ARRIVES.

Going East..... 10:40 A. M.
Going West..... 3:52 P. M.

FREIGHT ARRIVES.

Going East..... 12:20 A. M., and 11:35 P. M.
Going West..... 5:15 A. M. and 5:45 P. M.

Passengers with tickets are carried on freight trains between Topeka and Brookville.

GEO. C. WILDER. Agent.

Full particulars given next week.

The weather is simply magnificent this week.

Why don't you subscribe for the INDUSTRIALIST?

We invite brief, spicy, boiled down articles from the students.

The College has a few choice Berkshire and Essex pigs for sale. Persons desiring to make purchases should apply immediately.

The gentleman who promised to report the Manhattan Fair for us failed to do so, and it is now too late to say much about it. The displays generally were good.

The examinations were held last week and the reports of the grades will be forwarded to parents this week. Things are bulging along as vigorously as water in a mill-race.

The "cut" on the first page was engraved by Mrs. Kedzie, whose only instruction and practice in that art has been taken in this Institution. We submit it as a specimen block of a "practical" education.

The gentle Caloptenus squirtus has principally gotten himself frozen to death, and isn't browsing around multitudinously. He eats but little and spits black dispair. No damage done except to fall wheat.

The stone masons are about through and the plasterers are at work in the horticultural building. Mr. Winne is "grading" the dirt around it, and as the pile disappears the building looks as neat as a new pin.

Since our last report the following students have been assigned: Etta U. Degraw, Vienna, Pottawatomie county; Hamlin F. Puterbaugh, Topeka, Shawnee county; Albert H. Stiles, Pavilion, Wabaunsee county; George A. Cox, Junction City, Davis county.

Hon. Jno. Martin, Hon. Thos. P. Fenlon and Mr. J. F. Hopper, correspondent of the St. Louis Times, made a hasty inspection of the College this morning, and satisfied themselves that the appropriations for which the first two gentlemen had voted, as legislators, were properly expended.

Virtue always has its reward! By virtue of our editorial modesty we announced that the Regents, as contributing editors, would favor the readers of the INDUSTRIALIST with articles. One from Regent Kingsbury, received too late for this number, will appear next week, together with a spicy letter. Doubtless Regent Lawrence will be on time; as also will Gov. Salter.

We regret to learn from the Neosho Courant that Gov. Salter, chairman of our Board of Regents, cut his knee badly while cutting up corn. Trust that it is not serious. We have so often spoken to the Governor about cutting up, or he has to us—no matter which—that it is to be hoped he will pay greater heed to future admonitions. In the meantime, the thought vigorously suggests itself that while he is nursing himself he can also write the article promised to the INDUSTRIALIST. If, instead of cutting corn, he had been preparing said article, that knee wouldn't have been scalped. Other contributing editors had better take warning by his sad fate. The INDUSTRIALIST isn't a machine to fool with.

Students' Column.

The Alpha Beta Society met last Friday afternoon. An unusually large number in attendance. Among other things, Messrs. Failyer, Stewart and Howard were appointed to confer with the members of the Webster Society and make arrangements for a joint session next Friday afternoon. Miss Knipe and Mr. Burnham were initiated members of the Society.

The moot-court was declared next in order, which was an entire success; the witnesses for the most part were clear and concise. The pleas of the lawyers were brief and to the point. The case was decided in favor of the defendant. Students at the College need never be afraid to come and visit the Society.

Judge Williamson, of the Websters, will hold court next Saturday evening. The case of the State vs. a paddy for obstructing a railway will probably be heard. Mr. Leisure, the prosecuting attorney, thinks he has evidence enough to convict the prisoner; but Mr. LaTourrette, attorney for the defendant, will clear his client if it can be done.

At their last meeting a committee was appointed to confer with one sent by the Alpha Betas for the purpose of making arrangements for a union meeting. We anticipate a good time when this comes off. The union of the talents of these two societies will make a grand illumination. But we augur that we shall have too much Leisure, and there will be many Failyers; that the Gist of the exercises will be Child-like; that although the King promises to Ward off all danger, some will turn white as Cotton. JED.

EDITOR INDUSTRIALIST:—Permit me to make a correction through your Student's Column. The Webster Society, by its reporter, claims to have introduced moot-courts. I was here when they were introduced, and a desire to see "honor where honor is due" prompts me to state that to my certain knowledge the Alpha Betas held two moot-courts before the Websters saw the propriety of following their example.

If the Alpha Betas were consulted, no doubt they would willingly loan a portion of their surplus "thunder" to the Websters; but perhaps they would desire it to be of better quality than this which the Websters have attempted to filch. Neither Society could obtain a patent on originating moot-courts. They had previously been held elsewhere. Perhaps "Jed" was not aware of that fact, however. The Alpha Betas should feel encouraged; the "branch society," in which the ladies have been admitted on probation for two and a half years, has been discontinued; and the Websters now officially announce that they will admit ladies to the sanctum sanctorum. But they have received no lady petitioners,—a significant fact which needs no comment. The course of the Alpha Betas in admitting ladies to membership is thus doubly endorsed.

Since there is so much "lustre" in the Webster Society, why could they not challenge the Alpha Betas to public debate. Outsiders could then know something of their relative merits. According to their authorized reporter, "the Websters have the largest Society in the College;" and, at a certain meeting, they "sent in a little three-fourths vote." Now, there were nine members present at that meeting. Therefore, the Webster Society has twelve members, and ten of these have been received this term. From present knowledge I would state that the Alpha Betas have about twice that number. These "spread-eagle" reports do very well for persons at a distance, but they are somewhat pell-mell to an

OLD STUDENT.

H. S. Roberts, M. D.—Office south side of Poyntz Avenue, between Third and Fourth streets. Residence corner of Third and Pierre streets.

Bookseller and Stationer.—S. M. Fox, dealer in Fine Stationery, Pocket-Books, Envelopes, Gold Pens, Blank Books, etc. No. 127, Poyntz Avenue, Manhattan. 37-3m

Vocal Music.—Regular instruction and drill in the science and art of vocal music, without charge. Recitations in these classes are not reckoned as an "industrial."

Clother.—Wm. Knostman, dealer in Ready Made Clothing, Hats, Caps, and Gents' Furnishing Goods. A winter stock just received. Opposite post-office, Manhattan. 37-3m

Standard Stock! Standard Work!! Standing Prices!!! Anything in the line of Printing and binding done as well as any where in America, at the Kansas Publishing House, Topeka.

The Kansas Publishing House and Blank Book Manufactory, Topeka, Kansas. Book and Pamphlet Printing. Blank Books for every possible use. Geo. W. Martin, Proprietor.

Gardening for Profit.—Instruction and drill in Kansas Horticulture. The Nursery, Orchard, Vineyard, Vegetable Gardening, Flower and Landscape Gardening, and Kansas Forestry.

Berkshire and Essex Pigs for Sale. A few very nice pigs of the above sorts. The Berkshires are from the best strains of Arthur Stewart, and Russell Swanwick, of England. The Essex are from Jas. Harris' stock. Address, E. M. Shelton, Sup't Farm. 26-tf

Farming for Profit.—Special courses in Kansas Practical Agriculture. Simple Tillage, Farm Implements, Comparative Physiology, Stock Breeding, Mixed Husbandry, Rotation of Crops, Manures, Feeding, Buildings. Apparatus illustrating the course in Practical Agriculture.

Chemistry and Physics.—The most valuable and practical course in the West. Elementary Physics, Inorganic Chemistry, Organic Chemistry, Chemical Analysis, Agricultural Chemistry, Metallurgy, Chemical Physics, Meteorology, Pharmaceutical Chemistry, Photography and Household Chemistry.

English Language.—The direct aim of the course is to make the student skillful in handling the machinery called language, just as an engineer handles his locomotive. Drill in English, History of English, Structure of English, Study of Words, and Rhetoric. Constant practice in the class room, and, if desired, at the printer's cases.

Habits of Plants.—Thorough instruction in Vegetable Physiology; tracing the development of the root, stem, bud, leaf, flower and seed. Careful study of cereal grains, grasses, and other food-plants, and of native and foreign weeds. Special attention paid to the habits and best methods of preventing or destroying insects imatical to the Kansas Farmer.

Mathematics.—Practical, direct and thorough drill in Arithmetic, Book-Keeping, Industrial Drawing, Algebra, Geometry, Trigonometry, Surveying, Mechanics and Engineering. Work in Field, with Tape Line, Chain, Compasses, Transit and Level. The course is shaped for the benefit of the farmer, mechanic, or business man, rather than for the benefit of the astronomer.

Manhattan Bank.—E. B. Purcell, Banker; Jno. W. Webb, Cashier; Geo. S. Green, Attorney. A general banking business transacted. Bills of Exchange issued on all principal cities and towns of Europe. All collections have the personal, faithful and prompt attention of our attorney. Proceeds remitted promptly, at current rates of exchange, without any charge of commission.

The Annals of Kansas.—By Daniel W. Wilder, now ready for delivery. This book contains 691 pages. It is a Kansas Dictionary. It has double the amount of reading matter contained in Sherman's Memoirs, and three times as much as the thirteenth volume Kansas Supreme Court Reports. Price, postage prepaid, \$5.00. Orders solicited. Cash must accompany each order. 30-tf GEO. W. MARTIN Publisher.

Instrumental Music.—The following is the course to be pursued in the Department of Instrumental Music at the College the coming year: Two lessons per week upon Piano, Organ, or Guitar; two to three lessons a week in Harmony; one to two hours practice per day upon good instruments. Tuition, when paid in advance: Fall Term, 17 weeks, \$15; Winter Term, 20 weeks, \$18. If less than a term is desired, \$1.00 a week will be charged. Voice culture, fifty cents per lesson, or \$1.00 per week. The music rooms have been fitted up in a comfortable and attractive style.

[Concluded from first page.] exhibited in the plan are upon a raised platform, each seat being six inches higher than the one next in front, thus giving to students from all parts of the room a complete view of the lecture table. To each seat a neat writing desk with bracket is attached for note-taking. One hundred of these desk seats are provided, though if crowded the seating capacity of the room is about one hundred and fifty. The lecture table is of horse-shoe shape, conveniently arranged for the lecturer, with pneumatic cistern, water-pipe, drain-pipe, etc.

THE QUALITATIVE LABORATORY

lettered "B" is a room 21 by 58 feet, furnished with five large tables, and affording accommodation for forty students in analysis. The tables are enclosed to the floor and are completely equipped with water-cocks, sinks, bottle-racks, drawers, closets, &c.

THE QUANTITATIVE LABORATORY

marked "C" is a room of the same size as the preceding and similarly furnished. It is to be occupied by special and advanced students only. Underneath this room is a large storage cellar. Both these laboratories are, as already stated, completely ventilated and also partially lighted by six large sky-lights.

THE PHYSICAL LABORATORY

is the one lettered "E" in the cut, 24x50 feet. The room is lighted entirely by sky-light, and provided with large apparatus tables. It offers to students in both Elementary and Advanced Physics exceptional advantages in perpendicular light, convenience and room in the handling of apparatus. The sky-light is also admirably adapted to photography, for which complete facilities are provided. The entire wall space of the room is occupied by apparatus and cabinet cases.

THE OFFICE

is the room marked "I," 16x23 feet, and is intended as the office and study of the Professor in charge.

THE PRIVATE LABORATORY

lettered "H," of the same dimensions as the preceding, completely furnished with work tables, chemical cabinets, etc., for special and private work.

THE BALANCE ROOM

marked "G" is a small room 8x13 feet, is intended simply for fine weighing. The balances are supported upon massive, cut-stone shelves built into the walls, thus preventing all the inaccuracy and annoyance caused by jarring.

THE KITCHEN LABORATORY

lettered "F" is an apartment 18x32 feet. This room is under the charge of the Superintendent of the Woman's Industrial Department, and is to be fitted and equipped as a practice room in the application of the principles of scientific cooking.

The above rapid outline gives a compact

view of the general features of the building. Its minor arrangements and conveniences can of course only be appreciated and understood by a personal inspection of the laboratory itself. To students desiring to avail themselves of every modern facility in chemical work and study, this laboratory can safely be offered as second to none in the whole West.

KANSAS PRESS.

As an expression of our appreciation of the kindness shown to the INDUSTRIALIST by the Kansas press, we will insert gratis, for at least one month, a three-line nonpareil advertisement of any paper furnishing the copy therefor.

Record, Frankfort. \$1.50 a year. Campbell Bros., Publishers. 14-1m

Teleg^raph, Waterville. \$2 a year. W. P. Campbell, Publisher. 14-1m

Star, Hays City. A Republican paper published weekly by J. H. Downing. 16-1m

Independent, Oxford. Terms, \$2 per annum. Republican in politics. John Blevins, Editor and Proprietor. 14-1m

C

Register, Great Bend. Daily and weekly. Only daily within 219 miles. A. J. Hossington, Editor and Proprietor. 22-1m

Inland Tribune. A Republican weekly newspaper, published at Great Bend, county seat of Barton county. \$2.00 a year. 26-3m

Herald, Chetopa. The official paper of Labette county. Republican; \$2 per annum. Published by J. H. Hibberts & Co. 16-1m

Press, Girard. Established 1869. Official paper of county and city. Republican in politics. Wasser & Riddle, Editors and Proprietors. 22-1m

News, Peru. F. G. Moore & Co., Publishers and Proprietors. \$1.50 per year. A news sheet published in the interests of Chautauqua county. 22-1m

Herald, Florence. A wide-awake, local paper devoted to the interests of Florence and vicinity. Terms, \$1.50. Howe & Morgan, Publishers. 14-1m

Empire, Concordia. Leading paper of Cloud county. A readable, reliable, Republican journal. \$1.50 per year. H. E. Smith, Editor and Proprietor. 14-1m

Kansas Farmer, Topeka. The State Agricultural Journal. In its 14th year. Eight pages; weekly. Sample copies free. J. K. Hudson, Editor. 22-1m

Advance, Sabetha. Only democratic newspaper in northeastern Kansas. Published every Saturday. \$1.50 per year. E. A. Davis, Editor and Proprietor. 26-3m

Times, Dodge City. All the Texas cattle news. Published at the "Long-Horn Metropolis." \$2.00, in advance. Six months, \$1.00. W. C. Shinn, Proprietor.

Examiner, Hutchinson. An independent Democratic newspaper. Published every Friday. Official paper of city and county. \$2.00 per annum. Wm. J. Turpen, Proprietor. 22

American Young Folks, Topeka. An illustrated monthly paper for boys and girls. Fifty cents per year. Sample copy free. Address, American Young Folks, Topeka, Kas.

Kansas Churchman, Topeka. Organ of the Episcopal Church in Kansas. Edited by Revs. H. H. Loring, A. Beatty, Paul Ziegler. Eight pages; monthly. Fifty cents per annum.

Press, Wellington, Sumner county. A live, Republican journal. Is well patronized, and enjoys a large home circulation. John H. Folks, Editor. Folks & Bishop, Publishers. Subscription price, \$2.00 per year. Advertising rates furnished on application.

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